

It is also well known that the most experienced mining captains in Cornwall hold a large interest in the concern, and that the mine is situated in one of the richest districts in that country. Now, let us suppose a speculator buys 40 or 50 shares in such a mine, a 10/- note pays for the lot, which may within a few days be worth ten times the amount, for in a good district a rich lode may any hour be discovered, and quite unexpectedly. At present, everyone knows that the mine is poor, very poor, and hence the reason of the shares selling at such a price. Was not this the case with South Caradon, East Caradon, Herodafot, and a host of others? See what the prices of these mines are now. Such success may or may not attend the mines I have recommended, for, as I stated in my former letter, mining is all a speculation, and I now, as I did then, caution these parties against having anything to do with mines who cannot afford to lose their money. There are glorious prizes, but there are considerably more blanks. Has "Another Cautious Man" anything to say against this advice? A CAUTIOUS MAN.

ROCKS AND MINERALS—MINES AND MINING—No. VI.

BY EVAN HOPKINS, C.E., F.G.S.

ON THE TEXTURE AND STRUCTURE OF PRIMARY ROCKS.

The terms "granites," "porphyries," and "slates" are, as already explained, generic appellations, and necessarily include many varieties of crystalline rocks, differing much in composition and colour, although agreeing in their textures and general aspects. Granites are the bases of all formations. Whilst all other rocks are known to be limited in their area, and also in their thickness, granitic rocks exist over the whole surface of our globe. Although the granitic base is the foundation of all things terrestrial it is not at rest, but in a constant state of chemical mobility, and perpetually disturbing and changing the secondary formations deposited thereon from time to time. All granites present the same characteristic texture—that is, the aggregation of the primary crystals without a base, but necessarily differing in composition and the sizes and colours of the crystals. What is called true granite is a massive and compact aggregation of crystals of felspar, quartz, and mica; the felspar being usually predominant, and the flakes of mica least. Granite, by the dissolution of some of the felspathic constituents, will disintegrate. Granite in which the constituent minerals are nearly equal in size, and in which the granulation is most uniform and regular, united with a siliceous cement, is the best to resist the destroying action of the elements. The presence of felspar in excess, and in irregular and inordinate crystals, causes rapid decomposition. The felspathic granite produces by its decomposition deposits of kaolin, or china-clay, as seen in Cornwall and Devon, and the quartz and mica become separated, and form beds of sandstones. The hornblende granite is often called "syenite," owing to this variety having been first quarried at Syene, near Thebes, in Upper Egypt. It is a compound of quartz, felspar, and hornblende. The felspar in general is reddish, and the hornblende dark or black, the combination of the two giving a rich and striking colour and texture to the polished surfaces. The syenitic granites of Upper Egypt have a porphyritic appearance, as seen in Cleopatra's Needle, Pompey's Pillar, and in some of the quarries. The texture is often somewhat prismatic, and the quarries are intersected by straight and uniform divisional planes, like the meridional structures seen in America and Australia, thus presenting great facilities to extract long columns for obelisks. Therefore, it was comparatively an easy matter to the ancient Egyptians to cut out from their quarries long blocks, and float them down the Nile on rafts, from the first cataract to Luxor, Thebes, Cairo, and Alexandria, during the inundation of the river, and without the risk of breakages.

In consequence of a general desire to erect an obelisk as a national monument to the much-lamented Prince Consort, researches have been made in Scotland to discover a monolith which should exceed in height and grandeur any that has yet been raised by the hand of man. The quarries of Nubia, and the aid of the Nile for transport, might have enabled the Egyptians to effect such an object, but it cannot be done in this country. Syenitic granite is not only scarce in England, but the structure of the granites of England and Scotland is not favourable to produce long columns, even had we a river to convey them to their destination without breakage. Therefore, if we erect obelisks of great magnitude in England, we must construct them of separate blocks.

Hornblende granite often changes in the same quarry into hornblende porphyry, and again the hornblende porphyry into greenstone, basalt, &c. Fine-grained granite, containing large crystals of felspar, is called porphyritic granite. Many varieties of granites and porphyries are found intermixed in the same formation on the Continent and in America. Scotland and Ireland present similar variegated crystalline compounds.

The concretionary forms of the primary crystalline rocks, and the manner in which they are aggregated together, so as to constitute considerable masses, deserve a careful and special study by those who are desirous to learn the real conditions of our rocks. The concretionary structure is of two kinds—first, that which is exhibited in the integrant masses, of which those rocks are composed, and which possess forms more or less determinate, such as cubes, rhombs, and spheroids; secondly, the compound, or that which results from the aggregation of simple concretions, giving rise to divisional planes, bands of rocks, and slaty structure. The massive and fissile structures mutually pass into each other; this transition is commonly distinguished by geologists under the terms tabular, lamellar, foliated, gneiss, and schistose. This transition of the granitic base into the slaty structure is not a mere abstract idea, for it actually occurs in the same rock. The passage of granite into the laminated structure (gneiss), thence into slate (schist), may be observed in every primary formation, where these kinds of rocks can be examined in large sections.

Fig. 1.

NORTH HAFOD SILVER-LEAD MINING COMPANY.

The first general meeting of proprietors was held at the company's offices, Gresham House, on Monday, Mr. LIONEL N. BONAI in the chair.

Mr. T. SPARGO (the secretary) having read the advertisement convening the meeting, submitted the balance-sheet, from which the following is condensed:—

Sundry creditors	£ 185 15 8
Bills payable	85 0 0
Share capital paid	472 5 0 = £ 5043 0 8
Cash	£ 10 2 3
Bills receivable	375 0 0
Arrears	105 0 0
Purchases	3000 0 0
Plant and machinery	178 4 1
Cost at mine, management, and bills for nine months	640 0 1
Preliminary expenses, including advertising, registration, charges, surveying, directors' fees, and incidental charges	734 12 11 = £ 5043 0 8

Mr. Snel, the company's solicitor, was in attendance.

The SECRETARY then read the report of the directors, as follows:—

The directors have great pleasure in meeting the shareholders at this the first general meeting, inasmuch as it affords them a favourable opportunity to submit a detailed statement of the actual position and prospective value of the company's property. In order to convey an adequate idea either of the geological position or of the extensive character of this valuable property, your directors would beg to call the attention of the shareholders to the facts embodied in the prospectus that was issued by the promoters at the initiation of the undertaking, and which facts, your directors are pleased to observe, are continually being confirmed as the development of the property progresses. The unusually large superficial area of the property, combined with the fact that it has been proved to contain within its limits the productive lodes of the district, rendered it for a time difficult to determine the spot whence the larger proportion of its mineral wealth could be at once commanded and properly developed. But after some of the veins had been opened upon, your mining engineer, supported by the opinion of several eminent practical authorities, decided upon sinking an engine-shaft in such a position as to render as inexpensive as possible the development of two or three of the largest lodes in the set, and situated to the north and south of the present workings. Your directors have much pleasure in being able to state that in this selection your engineer has been eminently successful, as the lode upon the course of which the shaft is being sunk is, without exception, considering the depth, the finest that has ever been developed in the district. Your directors feel that they cannot too strongly impress upon the minds of the shareholders the peculiarly favourable position, geologically, which the property occupies, being surrounded, as it is, by the richest mines in that justly-celebrated district. The lodes of the Great Frongoch Mine, now making considerable annual profits, traverse the entire length of the North Hafoed set for upwards of two miles in length. To the east, and upon the same run of lodes, are the Nant-y-Crian Mines, which are also paying large dividends; to the south is the notable Cwmystwyth lode, which, upon a comparatively small outlay, has returned, and is still returning, large profits; and to the north and north-west are mines that have yielded immense quantities of rich lead ore. Your directors, under the advice of your engineer, have for the present confined the operations at the mine to the sinking of the engine-shaft upon what they believe to be the Frongoch lode, basing their belief upon the assurances received from all sources that the matrix of the lode, together with its general indications, are precisely similar in both sets. The shaft has been sunk about 14 fms. from surface, and the deeper the explorations are extended the more certain does it become that profitable and permanently satisfactory results will be secured when the productive depth of the district is reached. Already the lode is of an immense size, and there can be no doubt that at a depth of 25 or 30 fms. (which will be accomplished in a few months) the same success will attend your operations that at a similar depth has been realised in the contiguous properties. Prior to sinking upon the present, or Spargo's, lode there were several other important lodes opened upon, but, taking the direction and dip of each, it was determined, as you have already been informed, so to sink the present engine-shaft as to reach the course of one known to exist at a depth of about 30 fms. When this point has been reached cross-cuts will be put out to intersect the side lodes which have been proved at surface. There have been built carpenters' and smiths' shops and a counting-house, a water-wheel has been erected, a line of flat-rods laid down to the engine-shaft, and the first lift of pumps is on the mine; in fact, everything is in the most efficient state for the actual working of the property. While your directors, in retiring from office, congratulate the shareholders upon the possession of such a valuable property, they consider that they would be neglecting an act of justice were they not to call special attention to the eminent services rendered by Mr. Spargo, in having obtained from the lord not only a reduction of the dues from 1-16th to 1-20th, for a period of 40 years, which is a most important concession, but also in having succeeded in procuring for the company an area of upwards of 850 acres in the richest mineral district in Cardiganshire. In retiring, your

* See the letter on the "Proposed Obelisk."

Fig. 2.

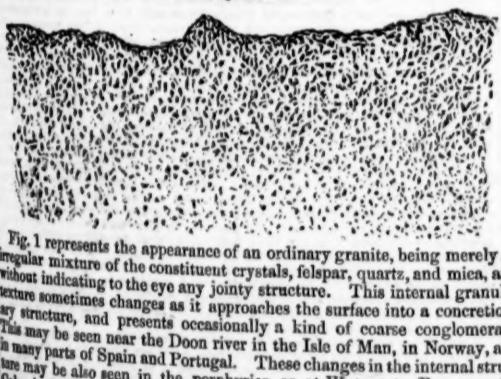


Fig. 1 represents the appearance of an ordinary granite, being merely an irregular mixture of the constituent crystals, felspar, quartz, and mica, and without indicating to the eye any jointy structure. This internal granular texture sometimes changes as it approaches the surface into a concretionary structure, and presents occasionally a kind of coarse conglomerate. This may be seen near the Doon river in the Isle of Man, in Norway, and in many parts of Spain and Portugal. These changes in the internal structure may also be seen in the porphyries, as at Watergate Bay, near St. Columb, Cornwall. The annexed is a section taken on the banks of the Rio Negro, in New Grenada.

Fig. 2.

In depth we find the usual crystalline aggregation of quartz, felspar, mica, and dark hornblende, confusedly mixed. As we approach the external surface of the mass, we find the crystalline texture passing, by an insensible gradation, into a spheroidal structure, the nucleus of each centre of attraction becoming denser, and more homogeneous than the parent rock, apparently from the concentration of the surrounding silica—a process somewhat analogous to the formation of flint nodules in chalk. Each nucleus becomes enveloped by a series of concentric coatings, and finally these exfoliate during disintegration, leaving the hard centres behind, like heaps of cannon balls. During these changes in auriferous formations an efflorescence of black grains with gold becomes developed within the concentric divisions, which will be noticed under the head of "gold-producing rocks," in a separate chapter.

Von Bach, in his "Travels through Norway and Lapland," notices similar changes from the granular to the concretionary:—

"At Kista, about two miles from Drontheim, the mica in the granite surround a kernel, and form large balls of two and three feet in diameter. The kernel is extremely compact and hard, and of a bluish grey colour. It is an homogeneous mixture of felspar, quartz, and mica. The surrounding mica is also bluish grey, glistening, and continuous, and everywhere covered with a multitude of beautiful pinchbeck-brown scales of mica."

These balls lie close together, and whole rocks consist of them. We are frequently tempted to consider them as a conglomeration of large blocks."

These kinds of granites become in the course of time totally destroyed to a considerable depth, leaving no traces of the previous existence of the granitic base, or the origin of the hard and globular boulders left behind. The reduction of granitic and porphyritic masses to hard spheroidal boulders may be seen on the large scale in South America, Australia, Africa, and in a lesser degree in the Islands of Jamaica, Cuba, and in Veraguas. It is very common in greenstone, porphyries, basalt, and other hornblende rocks. These concretionary changes, developed by a partial decomposition, cause rapid disintegration of the crystalline rocks within the tropics and in the southern hemisphere, and thus favour the liberation of the metals which they may contain, such as gold and platinum, and produce rich alluvial deposits along the flanks and the intersecting ravines. The spheroidal arrangement of the constituent ingredients is not simply confined to the interior, but is also characteristic of the external configuration of these kind of granitic masses. In like manner the laminated and slaty structure becomes gradually developed from an heterogeneous mixture of the crystalline ingredients into vertical flakes of mica, in a linear direction, and thus divide the formation into bands of rocks, granites, gneiss, slate, &c., which will be treated in the next chapter.

Meetings of Mining Companies.

SOUTH WHEAL FRANCES MINING COMPANY.

The bi-monthly meeting of adventurers was held at the mine, Illogan, on Monday, Mr. R. BROAD in the chair.

Mr. R. BROAD in the chair.

The usual preliminaries having been disposed of, the agents report and statement of accounts, of which the subjoined is an abstract, were submitted:—

Cr.—Balance last audit	£2208 10 2
Copper ore and tin sold	2572 17 5 = £1781 7 7
Dr.—Mine cost, Feb. and March	£1552 10 7
Merchants' bills	399 9 4
Dues	171 10 6
Water-course rent, &c., one year	95 12 3 = 2219 2 8

Leaving credit balance £2562 4 11

Of this amount £947 was applied to the payment of a dividend of 1/- per share, and 2065 4s. 1d. was carried to the credit of next account. The profit on the two months' working was £535 14s. 9d.

The following report of the agents was then read:—

May 5.—New North Lode: The 154 is driven 54 fms. west of Marriott's cross-course; the lode is 3 ft. wide, and worth 6/- per fm. for tin. The 144 is 46 fms. west of Marriott's cross-course; the lode is 2 ft. wide, composed of soft spar and flookan, yielding a little tin, but not of much value. The 134 is 66 fms. west of Marriott's cross-course; the lode is 1½ ft. wide, producing stamping work for tin. We are now rising over this level 3 fms. behind the end for ventilation; the rise is up 3 fms., in which the lode is 1½ ft. wide, and worth 13/- per fm. for tin. The 124 is 74 fms. west of Marriott's cross-course; the lode is 1 ft. wide, unproductive. The 104 is 31 fms. west of Pascoe's shaft; the lode is 3 ft. wide, composed of quartz, chlorite, and grey and black copper ore, worth 8/- per fm., and promising further improvement. The 94 is 58 fms. west of Pascoe's shaft; the lode is divided into three branches, all of which are unproductive. In the 54, east of Pascoe's, the lode is 1 ft. wide, producing 1 ton of copper ore per fm. In a winze sinking below this level, 5 fms. from the end, the lode is 15 in. wide, yielding 1½ ton of copper ore per fm. In the 84, west of Pascoe's shaft, the lode is 1 ft. wide, unproductive. In the 64, east of Pascoe's, the lode is 1 ft. wide, producing 2 tons of copper ore per fm. In a winze sinking under this level the lode is 1 ft. wide, yielding 1½ ton of copper ore per fm. In the 64, west of Pascoe's shaft, the lode is squeezed by elvan, and unproductive. In the 54, east of Pascoe's, the lode is 1½ ft. wide, producing stones of copper ore and, judging from its promising character, we anticipate an improved lode is on. Since the last meeting of the adventurers we have intersected the north part of the lodes in the 64 fm. level cross-cut from Pascoe's shaft, and have opened it on by level about 7 fms.; for most of this distance the lode is 1½ ft. wide, and worth from 20/- to 25/- per fm. In the eastern end it is worth full 20/- per fm.; west of the cross-cut the lode in the last 4 or 5 ft. has been disturbed by a patch of elvan, but is again improving, and in the end is worth 20/- per fm. In the 44 on this part, east of the cross-cut from Pascoe's shaft, the lode is 1 ft. wide, producing 1 ton of good quality copper ore per fm. In the winze sinking under the 44, which is down 5 fms., the lode is 1½ ft. wide, worth 30/- per fm. We are driving two cross-cuts from Pascoe's shaft to intersect this part; one at the 74, and the other at the 64, with six men in each; and should the ground continue as it is as present we hope to cut the lode in both before our next account. In the tribute department there has been no change of importance to notice during the past two months.—WILLIAM PASCOE, managing agent; JOSEPH PRISK, JOHN POPE, agents.

It was moved by the CHAIRMAN, and carried unanimously, that the accounts and reports now submitted be passed.

Mr. WILLIAM HARRIS: I wish to ask our Chairman if there is anything new about our legal affairs? Of course, I do not wish him to state anything which the committee do not deem advisable to be made public, but, I believe, we have no secrets.

The CHAIRMAN: Certainly not; we have nothing to conceal. Capt. Charles Thomas has been occupied, according to the orders of the Court, in assessing the damages in respect of the trespass in the action of "Reynolds v. Buckley," in which he has been met with every opposition from the other party.—Mr. HARRIS: Very naturally.

The CHAIRMAN: Mr. Finch and Mr. Robert have met Capt. Thomas on the matter, and we presume that by this time Capt. Thomas's report is made to the Court. We have had no communication yet, and must wait patiently. When the award is made we have only to receive the amount, with the costs, and then that matter will be closed.

Mr. THOMAS NICHOLAS: Is there not another action in which they claim something from us?—Mr. CADY: We have paid over £500/- into Court to make that good. We found out we were wrong in one part, and we hastened to remedy it by paying the amount into Court.

Mr. NICHOLAS: Then I understand the matter stands thus—they made a claim on you, you paid it according to your own estimate, and that is as much as they can possibly claim?—Mr. CADY: Precisely so; next term we hope to have this other case, Lyle v. Richards, also on and disposed of.

After some further conversation, principally about Mr. Finch's new bound-set, which was to be put up within the limits of Wheal Basset set, the leading shareholders expressed their belief that this prolonged litigation was now approaching a satisfactory termination. A vote of thanks to the Chairman terminated the proceedings.

The CHAIRMAN said the proprietors would be able to gather the purport of the present meeting from what had taken place upon the last occasion he had the pleasure of addressing them. It was to redeem a pledge which the directors then gave that they would, in the first place, caused a considerable reduction in the capital of the company about to be formed, to protect the interests of the former shareholders, and to offer some security for the advances made by the late directors. Before, however, proceeding to discuss these matters, he would beg permission to state that this meeting would have been held before the present time, had not the board engaged one of the best mining engineers in Cornwall—Capt. Charles Thomas, of the Dolcoath Mines—to inspect the property, and whose report was only received on Thursday last. Capt. Charles Thomas was a perfect stranger to the directors, but he had been selected because he was known to be the best man they could find. Before making any further remarks he would ask Mr. Goodman to read the report.—The SECRETARY read the report, as follows:—

April 30.—The following is my report of the Atlas Mine, South Devon, which I inspected yesterday.—The limits of the mine, as shown me by Capt. Warren, the agent, are extensive, being, I think, fully 600 fms. in length on the line of the tin lode hereafter to be described. The site of the steam-engine, and of the explorations on this lode, is near the south-east boundary, the gible or church land adjoins it in that direction. The engine-shaft is sunk perpendicularly 20 fms. from surface, a cross-cut driven southward some 40 fms. to the tin lode, not far from the shaft, and also a small lode, containing a little tin, at 16 fms. short of the lode. The report shall be chiefly on the tin lode itself; it being, therefore, to say that the 20 fm. level is driven 5 fms. east of the cross-cut, and 15 fms. west to the flat-rod shaft, which is sunk on and close to the lode, which underlies north fully 2 ft. per fm.: this level yielded tin of some value for 5 fms. in length near the cross-cut, and a little tin in places in other parts of the level. The shaft was sunk 5 fms. deeper, and the 25 fm. level driven 4 fms. west and 16 fms. east of it; the lode in this level directly under is much better than in the upper level, a considerable and decided improvement; the 20 fm. level, in length, together with stoping 5 fms. in the back near the shaft, yielded 7 tons of tin, sold for about 430/-, or 17/- per fathom on the average. The eastern part and the present end are worth full 25/- per fm. The surface shows signs of mining having been carried out here to a few fathoms in depth a long time ago; this being drained by the present company some little tin has been raised at 7 fms. deep, a few fathoms east of the deeper workings described above, holding out good hope for more to be done. The water-wheel, however, now on the mine, to which 12 stamp-heads are attached, is of power enough to work those 12 and others also, if a supply of water could be obtained, but the present supply is in summer, I understand, little. The attention of the company should be directed to the getting a great increase of water forthwith, which Captain Warren states there will be no difficulty in obtaining at a moderate outlay. The steam-engine on the mine, which is used for draining, is of power enough to work the mine to a great depth and extent. A good engineer might contrive to employ a portion of that power for stamping for some years to come, but that need not be done if water can be obtained to work the wheel referred to above. Having thus reported on the main object, I beg to remark that there are other old workings at surface lying between the engine-shaft and the tin lode, which should be further opened by way of trial, and that the lode cut in the 20 fm. level cross-cut should be intersected when the diagonal shaft is sunk 10 or 12 fms. deeper, to accomplish all these objects a capital ought to be raised of 4000/- or 5000/-, which I have

to 10,000^l, those gentlemen were quite willing to take one-third of that amount in shares, leaving the remainder to be paid at any definite time to be agreed upon, providing it carried an interest of 4 per cent. per annum. He had asked Mr. Sari, as a matter of courtesy, having worked together in the old company, to attend here to-day to give his advice and assistance.

Mr. W. SARI said, if gentlemen present would give him their attention for a short time he was sanguine enough to think that his views would be endorsed as to the future working of the new company. He did not possess any interest in the second company, but from the part he had taken in the former one he felt he was simply discharging a duty to aid in any way he could in the formation of a new company, and in protecting the interests of the original shareholders—in fact, redeeming a pledge given that the late directors would, in the first place, propose a reduction of capital to a very large extent; secondly, that they would protect the interests of the old shareholders; and thirdly, offer some security for the advances made by the late directors. They proposed to reduce the capital to 35,000^l; that amount had not been determined upon without making many enquiries, and he thought they might assume that the figures which he was about to place before them would be about the result. For instance, it was thought likely that out of the 18,000 or 19,000 of the old shares, about 10,000 would be applied for—that is to say, 10,000^l in shares would have to be provided for, to be put down as a bonus to the old shareholders, as 100 shares in the old company would be entitled to 200 shares in the new company by the payment of 100^l. The next item that would be taken out of capital would be the 5000^l for working purposes, to be exclusively appropriated to the development of the mine, in carrying out the suggestions contained in Capt. Thomas's report. The next item of 5000^l, when raised, would be appropriated to paying off the first mortgage. The next item would be the 3000^l preference shares, leaving 12,000^l, the third mortgage, advanced by the late directors. Those several items would be subscribed to carry out all those points, and, therefore, it was proposed to carry out a few of them at a time. Of the 5000^l for working purposes, 5^l per share would have to be paid at once, and the remainder at instalments of four months, giving twelve months for the whole. The first mortgage, of 5000^l, could stand over, and of the 12,000^l, the directors agreed to take 3000^l in shares at once, and the 9000^l to stand over. If the plan now proposed could be carried out, shareholders in the old company would, upon the payment of 15^l per share, receive for every 11^l share one 2^l share in the new company. It was also proposed that a new direction should be formed, consisting of seven members, the qualification to be 500 shares. The shares of the vendors would be all concealed. As he did not propose to have any interest in the new company, he was perfectly disinterested when he said that he fully believed it was for the interest of the old proprietors to make the effort. Gentlemen must not forget that the mine since December last had been more than paying its way, and that it was the opinion of Capt. Thomas that an expenditure of from 4000^l, to 5000^l, would make it a very profitable mine. He did not look upon this expenditure as a dead outlay, because it would be disbursed in sinking the shaft upon the course of the tide, which was likely to produce satisfactory results.

Mr. BARTHORN enquired if the iron was taken into consideration?

The CHAIRMAN said capital was provided for working the iron, with regard to the issue of which Mr. Rogers was as firmly convinced as ever of the successful result, and he was only too anxious to recommend.

Mr. BARTHORN enquired whether the board anticipated the capital would be subscribed?

The CHAIRMAN replied that the board most certainly expected such to be the case.

Mr. SARI said, taking Capt. Thomas's minimum, that the mine would yield 10 tons of tin per month, there would be, at 40^l per ton profit, a return of 400^l per month, or 4800^l per year. That alone would give 15 per cent. upon the full capital of 35,000^l, and 4 per cent. upon the mortgage money—that is, supposing the whole of the 5000^l was taken as a dead outlay; and it should not be forgotten that, as this mine was a freshold, the dues and royalties, with surface damages, thus saved would far exceed the amount of interest on the mortgage.

Mr. BARTHORN thought if the old shareholders were to sink their original shares, and take the same number in the new company, they would be in just the same in position as they would by adopting the course proposed.

The CHAIRMAN said they could not be in the same position, because the capital of the new company would not be much more than half the amount of that of the old company, and dividends would consequently be proportionately increased.

A SHAREHOLDER suggested, if the proposed plan was not acceded to, that no advantage should be given to the old shareholders, but that the whole of the profits should be divided equally among the new shareholders.

Mr. SARI said the board could have no possible objection to such an arrangement, but should the property, as it undoubtedly would, become valuable, the original shareholders must not reflect upon the late directors that they had not redeemed their pledge by giving them full opportunities—nay, advantages—by becoming interested in the newly-formed company.

A PROPRIETOR was sorry to say that his fellow-shareholders did not appear willing to save themselves.

Mr. PRITCHARD (the company's solicitor) said the fact was the original proprietors were asked to subscribe only 5000^l, to save their property. It was recommended that a circular embodying the outline of the plan now submitted to the meeting be forwarded to each shareholder.

After some further discussion, a vote of thanks was passed to the Chairman, when the proceedings terminated.

The following are the propositions now submitted for the formation of a new company to be called the Atlas Mining and Smelting Company (Limited), capital 35,000^l, in 35,000 shares of 1^l each. Purchase-money in cash and shares, 17,000^l; bonus to late shareholders (say), 10,000^l; bonus to holders of preference shares, 3000^l; working capital, 5000^l;—35,000^l.

Mode of Payment of Purchase-Money.—Upon 5000 shares being subscribed for the proceeds will be immediately applied to the vigorous prosecution of the necessary works of the Atlas Tin Mines, and the completion of the iron smelting furnace at Slade's Head, and it is agreed that 3000^l of the purchase-money named shall be taken in paid-up shares, and the balance, bearing interest at 4 per cent., may remain over if desired; and when it is remembered that the Smallcombe estate, upon which are situated the Atlas Iron and Tin Mines, is freshold, and consequently subject to no royalties, dues, or surface damages, this small additional amount for interest on the balance need scarcely be taken into account. And further, with a view to render still greater facilities to the late shareholders, the payment of the shares they may subscribe for shall be made by four calls of 5^l—that is, 5^l per share on allotment, and the remainder by 5^l instalments, in four, eight, and twelve months hence.

Bonus to Late Shareholders.—It has been estimated that applications for fully 10,000 shares will be made by the late shareholders, and it is proposed that for every 1^l paid 1^l free share shall be given; thus their position, as must be apparent, will be materially improved, as a holder of 100^l stock in the old company (with a capital almost double that now named) will receive, upon payment of 100^l, 200^l worth of stock in the new company, with a greatly reduced capital.

Preference Shareholders.—By this liberal plan it will also be seen that the preference shareholders in the late company will fare better than they could have hoped for had that company continued its operations, inasmuch as their interests are entirely protected by allotting to them a free share in a company of one-half the capital for every share they held in the late company.

Working Capital.—This sum, 5000^l, is deemed quite ample to vigorously prosecute the works contemplated to be carried on with a view to the thorough development of the Atlas Tin Mine, the completion of the furnace, including labour, trade debts, &c., and it is proposed to apply this amount exclusively for the purposes named, as explained in the first paragraph, under the head of "Mode of Payment of Purchase-Money." Your late directors have recently caused the Atlas Tin Mine to be inspected by one who ranks as high as any in the mines in this kingdom—Capt. Charles Thomas, of the Dolcoath Mine, Cornwall—whose highly satisfactory report is annexed, and they feel every confidence in asking their late co-shareholders to place implicit faith in that report. They are the more justified in doing so, from the fact that the tin mine has, from the commencement of this year, even from its present shallow depth, considerably more than paid its cost. They, therefore, trust that you will see that it is in your interest that this final offer is made, and that you will not allow this property to change hands, and others benefit by your indifference. I am requested to add that the time for application for shares in the Atlas Mining and Smelting Company to the late shareholders of the South Devon Company is necessarily limited to the May 20, after which no application whatever can be received.

WEST PAR CONSOLS MINING COMPANY.

An adjourned general meeting of proprietors was held at the company's offices, Bishops-gate-street Within, on Tuesday, Mr. LEONARD in the chair.

Mr. J. H. MURCHISON (the secretary) having read the notices convening the meeting, stated that since the adjournment of the last meeting he had written to Mr. Trefry, to recommend some experienced agent, in whom he had confidence, to inspect the mine; when Mr. Trefry, who was largely interested in Par Consols, and other mines in the district, recommended Capt. Woolcock for that purpose. The report of Capt. Woolcock had been received, which was as follows:

May 1.—The engine-shaft is sunk to the 65 fathom level, a cross-cut is driven north 60 fms., and driven east on the course of the lode 130 fms., the present end being about 20 fms. east of Dauke's shaft, leaving about 85 fms. to drive to reach the eastern boundary of the sett; the lode for this distance will average 3 ft. wide, of a very promising appearance, and producing tin, its yield for the last 20 fms. driving being about 1½ cwt. of tin per 100 sacks. The 55 is driven east of Dauke's shaft about 60 fms.; the lode in the present end is divided by a horse of kilas, each part being about 6 in. wide, containing a little tin, but not sufficient to value at present: the lode in the back of this level, for 50 fms. east of Dauke's shaft, will average 2 feet wide, and will yield a quantity of tin-stuff for stamping; this end is within 17 fms. of the eastern boundary. The lode in the 45 is at present small and unproductive. There are eight pitches working on tribute in the backs and bottom of the different levels, the work being broken from them producing on an average 3 cwt. of tin per 100 sacks. A great quantity of whole ground is still standing in the mine, and the lode being of nearly the same character throughout, I am of opinion that large quantities of tin-stuff could be broken in the different levels which would pay for working, provided there were stamping-power sufficient to return it: the present engine might be applied to this purpose, and for winding also.—North Mine: Chalmers's shaft is sunk about 13 fms. from surface, an adit being brought in at 7 fms. deep, in driving which two lodes have been intersected: the first is a copper lode, about 20 fms. south of the shaft, 2 ft. wide, composed of quartz, pebbles, and muriatic, containing a little copper ore; the other is a tin lode, which has gone through the shaft at about the adit level: this lode is upwards of 20 ft. wide, composed of capel, pebbles, and a little spar, but being so shallow is in an unseated state; it appears to underlie very fast, I should say 6 ft. per fm., but not being sufficiently opened out I cannot be positive on this point: this underlie being so great, and the north boundary being within 40 fms., in sinking the shaft to 40 fms. deep a cross-cut must be driven 40 fms. to reach the lode, which would then be all but out of the sett, therefore unless an extension of ground north could be obtained this shaft will be of little service. In order to prove the mine, I would recommend the sinking of a new engine-shaft 60 fathoms deep further east of Chalmers's, and north of the old mine, which I have estimated will cost about 4000^l, including a 60-inch cylinder engine, with all necessary pitwork, &c., or an engine might be erected at Dauke's shaft at much less expense, as this shaft is already sunk 65 fms. on the course of the lode, and a good cross-cut driven north from the 55 about 35 fms., which could be extended to the boundary, and, consequently, intersect all the north lodes. I should also advise the driving of the 65, east of Dauke's shaft, to be continued. By the extension of this level, and carrying out the before-named proposals, I have not the least doubt that it will lead to good results, and prove a lasting and profitable mine. In looking over the machinery and materials at present on the mine, I have estimated the value at about 1400^l.—W. WOOLCOCK.

A statement of accounts was submitted, made up to the present date, which showed a balance of liabilities over assets of 13751^l.

Mr. RICHARDSON said that the opinion of Capt. Woolcock was so totally different from that previously received from another agent, and in every respect so favourable, that he suggested a copy of it should be sent to each shareholder.

A SHAREHOLDER enquired about nine years.

Mr. RICHARDSON enquired if there would be any difficulty in obtaining a renewal of the lease?—Mr. BARRY replied that there would be no difficulty in that respect.

Major CARLTON (the lord) contended that the mine had not yet been proved. The

property had been in the course of development for ten or twelve years, and yet they had never got below the 65 fathom level—there could be no doubt money had been wrongly spent. His idea was that below the spot where the rich course of tin was discovered, and which yielded such an immense quantity of ore, was certainly the most likely place to find a similar deposit, or, rather, a continuation of the same deposit. But if proprietors intended to work the north part it might, perhaps, be well to give up the other portion of the property.

The CHAIRMAN suggested that a deputation of shareholders should appoint to meet Capt. Woolcock on the mine, to discuss and determine upon the best course to be adopted.

Mr. FITTAR said he had lost all confidence in the present agent. When the mine was under water, Capt. Webb told him that it would never pay; but at another time, when the mine had been stopped, and it was being unwatered for the purpose of obtaining the materials, Capt. Webb spoke in the highest terms of the prospects of the property. The plain question now was, whether the proprietors would continue to open the mine, or whether it should be given up altogether?

Mr. WILSON suggested that the present meeting should be further adjourned, to give the absent shareholders an opportunity of perusing the report of Capt. Woolcock, as well as the letter of Mr. Trefry, which really was of more importance than the report itself.

Mr. RICHARDSON assumed that, if the present company determined to continue the development of the old mine, Major Carleton, their lord, would have no objection to grant an extension of the lease, or, perhaps, to forego the dues for a certain time, probably until a dividend was paid.

Major CARLTON said that was a serious proposition, the more especially as they were talking about extending their operations northwards, and to abandon the south part of the mine altogether. If the proprietors thought of adopting that course, he thought it would be better to give up the south part; but should they determine upon working the old mine, he would meet them in as fair a manner as he well could.

Mr. WILSON said it appeared to him that an extension of the lease was of no use, unless they intended to work the old mine.

Major CARLTON stated the present company sold from one level alone, the 45, upwards of 8000^l worth of tin and copper about two years since, which for a time more than paid the costs of working the old mine; and although the 55 and the 65 fm. levels might not be so good, that, to his mind, was no argument that deeper levels would not be better even than the 45. He believed the celebrated Par Consols, the neighbouring property, was a very forcible instance. The late Mr. Trefry, who was one of the largest proprietors in Par Consols, and a most successful miner, believed that the same results which had been achieved in that mine would be secured in West Par. The Par Consols was abandoned by two sets of adventurers before Mr. Trefry took it up—and that mine was considerably deeper than West Par. All he meant to say was, that a 45 fm. level was no depth to prove the value of a mine in that district. He did not mean to say that the present company had not been unfortunate hitherto in its expenditure; but at the same time, had some of that amount been expended in deepening the mine, he believed very different results would have been realised.

The accounts having been passed and allowed,

Upon the proposition of Mr. FITTAR, seconded by Mr. BANCKS, it was unanimously resolved that a special meeting be summoned for Wednesday, the 21st inst., to take into consideration the advisability of abandoning the mine, and dissolving the company, or to provide capital for the further prosecution of the undertaking.

Mr. WILSON suggested that a form of proxy should be sent out to each shareholder, to ascertain whether they would continue or discontinue.

After some further discussion, a call of 1^l per share was made, when the proceedings terminated with the usual vote of thanks to the Chairman.

NATIONAL PROVINCIAL BANK OF ENGLAND.

The twenty-ninth annual general meeting of proprietors was held at the chief office, Bishops-gate-street, on Thursday.

Upon the proposition of Mr. C. H. ELLIS, seconded by Mr. R. B. WADE, Mr. J. MINET LAURE was called to the chair.

The advertisement summoning the meeting having been read,

The CHAIRMAN said, in asking proprietors to consider the most satisfactory report which it had been the good fortune of the board to present, he could not, at the outset of the proceedings, avoid expressing the very deep regret—which, he was sure, was participated in by every hon. proprietor, and especially by his colleagues—that they did not see present one of their oldest colleagues—he meant Mr. Bell. Mr. Bell had been with them many years; he was one of the directors with whom he (the Chairman) became acquainted at the commencement of his connection with the National Provincial Bank, and during the whole period which he had had the honour of occupying a seat at that board he had observed the marked zeal and interest which Mr. Bell had taken in the whole of its proceedings. Mr. Bell was, in fact, wrapped, as it were, heart and soul in the bank—he made himself master of the whole of its details, devoting a very large proportion of his time to its affairs; and he (the Chairman) was only expressing the opinion entertained by all his brother-directors, and most certainly his own, when he said that in the decease of Mr. Bell they had experienced a very severe loss. (Hear, hear.) Having paid that very brief and most inefficient testimony to a late conductor, he would draw the attention of proprietors to a much more agreeable subject, which was the consideration of their twenty-ninth annual report. It would be recollected that the harvest of 1860 was deficient, and that 1861 commenced with a very heavy exportation of the precious metals. There was a great demand for bullion on the part of the Bank of France, and that there were considerable failures in commercial houses, especially those connected with the Levant trade. The consequence of these circumstances was, that considerable apprehension prevailed, and there was great pressure in the money market. Naturally, a very great increase in the value of money took place, although it was not maintained during the whole of the year. The civil war in America considerably curtailed operations in that quarter, and unquestionably had one of its results the leaving for disposal of the large amount of capital usually employed in the American trade. The weather in this country was propitious, and flattering hopes were entertained of the harvest, which were afterwards realised. The result was, the value of money diminished, falling from 7 and 8 per cent. in January, to 2 and 3 per cent. at the close of the year. When he had had the honour of reading the twenty-ninth report, it would be for proprietors to say whether they were satisfied with the services the directors had rendered during the past year, and whether, under the circumstances, they had not done the best they could with the interest entrusted to their charge. (Hear, hear.) He, as an individual, and by no means an inconsiderable shareholder, must venture to hope that proprietors would give the board the benefit of a favourable verdict. He now came to another consideration, which was one of importance and interest—an increase of capital. Proprietors would recollect that rather a considerable increase took place some few years since, and as the board of directors were not a privy council, and not sworn to secrecy in all cases, he was sure he would be absolved upon this occasion if he took the liberty of putting proprietors in possession of the result that followed the increase of capital which took place in 1856. He thought it was only fair and candid for him to say that upon that occasion it was with great difficulty he brought his mind to assent altogether to that proposition, but he must candidly say that he had been most agreeably disappointed in the result, for so far from that increase being attended with unfavourable consequences, it led to a very considerable diffusion of their stock, and greatly increased the interest which the public generally took in the proceedings of this establishment, the result being a very considerable and important increase of business. He believed it was now perfectly ascertained that it was owing to the diffusion of shares throughout the different localities that a great number of the local joint-stock banks were enabled to derive such profits as they did from their local business. Under these circumstances, he had given the proposition for a further increase of capital his most cheerful assent. There were two circumstances which had induced the board to make this proposition at the present period. In the first place, the abundance of money, which he believed would make it not at all difficult for proprietors to pay their calls; and, secondly, the board thought they had now arrived at the period when there should be made a very material increase to their building fund. For which purpose it was proposed to apply the premium of 4^l per share; that would be a very considerable addition to that sum, which amounted at present, with principal and interest, to 30,000^l. The bank possessed a very considerable amount of house property throughout the kingdom. They began by hiring premises, and as their business increased they had, in many cases, bought the premises which they occupied. Many of those premises now require rebuilding, and others repairing, and under those circumstances the board thought it was a prudent course to increase the building fund, so as to be prepared for all contingencies. He had now to congratulate his brother-shareholders upon the very high position which their bank occupied—it had a large and increasing business, being conducted upon sound and safe principles. (Hear, hear.) There was another point to which he must advert—he referred to the personnel of the officers of the bank. Since he had been connected with that direction, he did not recollect one instance that any member of the board had been actuated by personal feeling upon any subject that had been brought under notice; and when he considered the skill displayed by his hon. friend, the manager (Mr. Robertson), and the numerous staff he had to command, and the great tact he showed in dealing with the very varied questions which came before him, he (the Chairman) did not know which of his qualities most to admire. (Hear, hear.) Of the gentlemen comprising the staff here and throughout the kingdom he could not speak too highly. Throughout the whole of the officials there ranged a very high degree of intelligence, and a high scale of education. He was sure proprietors would appreciate the liberal policy adopted by the board in giving the officials some share in the profits of the late most prosperous year. (Hear, hear.) The board were not unmindful of the fact that they had to deal with a most liberal body of shareholders—indeed, he believed that the great amount of success which their bank enjoyed was due to the forbearance exercised by the proprietors during the many years the bank was struggling to reach the eminence it had now attained. He would now proceed to read the report:

In presenting to the proprietors their twenty-ninth annual report, the directors are happy to state that their labours during the past year have been more than usually successful. In 1861, as in the previous year, the value of money underwent considerable change. In Jan. the rate of interest rose to 7, and in Feb. to 8 per cent. As the year advanced, however, the aspect of monetary affairs became more favourable, and with the exception of a single reaction in the month of May, the value of money rapidly and continuously fell until Nov., when the rate was quoted 3 per cent. The average rate of interest, however, for the year was upwards of 5 per cent., and the bank having enjoyed also comparative immunity from casualties, the directors are enabled to present the following favourable statement to the proprietors:

Rest, or undivided profits at Dec. 31, 1860, as exhibited at an annual meeting

takes the whole of the water. The 40 yard level, driving west from Pugh's shaft, is with out alteration since last report.

CHARLOTTE UNITED.—R. Kendall, J. Penberthy, May 3: The lode in the 20, west of engine-shaft, is 18 in. wide, yielding 2 tons of ore per fm. The lode in the 70, west of engine-shaft, is split into two branches, but is yielding some good stones of ore. The lode in the 50, east of engine-shaft, on the new south lode, is worth 21. per fm. The rise in back of the 40, on the new south lode, is worth 10. per fm., and is looking very well. The lode in the 50, west of the cross-cut, on King's lode, is 2 ft. wide, yielding 2 tons of ore per fathom, worth 15. per fm.; the same lode, east of cross-cut, is producing stones of ore. King's shaft is 8 fms. below the adit level; sinking by eight men as fast as possible; the lode is 18 in. wide, producing good stones of ore, which is a good indication; we are expecting a good and productive lode in this shaft every fathom in sinking.—**TRENOV.** The lode in the 40, west of Norden's shaft, is 4 feet wide, composed of white iron, spar, mundic, and some good stones of copper ore, but not much to value yet; the character of this lode is very kindly. We are looking forward for a great improvement in this part of the mine in every fathom driving; the lode in the same level east is 5 ft. wide; lode not taken down yet.

CLARA UNITED.—Jas. Lester, May 7: The 20 has been extended east 4 fms. 0 ft. 8 in. during the past month; the lode is 3 ft. wide, yielding from 4 to 5 cwt. of lead ore, and about 1/2 ton of blende per fm.; set to four men, at 90s. per fm. The 32 fathom level east has been driven 3 fms. 2 ft.; the lode is small and poor. I have for the present suspended this, and put the men to cross-cut about 12 fms. behind the present end, as by the dialling there must be a portion of the lode gone off in that direction. The water from the winze east of boundary shaft is not yet drained. I have, until such is done, set the men to stope in back of the 32, east of winze, at 50s. per fathom. The stope west of winze, in back of the 32, to six men, at 50s. per fm.; the lode on an average is worth 1/2 ton of lead ore per fathom. In consequence of the surface water being rather scarce, I have not yet attached the rods to the pumping-wheel, to get water out from quarry shaft to drive the cross-cut agreed upon at the meeting last week, but will do so as soon as we have sufficient water for that purpose.

COED MAUR POOL.—M. Wasley, May 7: The weather has proved wet and stormy here during the past month, and very much impeded the surface operations. However, I am glad to inform you that the preparations for sinking are completed, the line of rods all up, and the boundary shaft sinking since Monday last. As far as yet seen the ground is not unfavourable for working, so that we are in strong hopes of making good progress in the sinking as our drainage powers are calculated as well as possible with the materials here. The western end driving on the Chandler's north lode in the Fridd ground is yielding a fair quantity of ore, and looking much as last reported. The eastern end on the same lode in the Coed ground is improving, and producing stones of ore, but not yet to value. We are driving the north-east end on the new lode; the ground is stiff for working, but it is worthy of our notice, as the lode is productive and improving in value. We shall attempt the sinking at Wasley's shaft some time this month, if possible. The quantity of ore at the quarry and on the mine, in addition to the 20 tons sold and the royalty paid, is 13 tons, in the course of dressing. I may add that all our prospects throughout the mine are looking good and encouraging.

CRANE.—R. Skewis, May 7: There is an improvement in the 20, west of the whin-shaft; the lode is now 2 ft. wide, composed of spar, capel, jack, lead, and copper ore, and is altogether a very promising lode. The rest of the mine without change to notes.

CROOKHAVEN.—W. Tonkin, May 2: I find during the past month that the plat has been cut to my satisfaction, and in cutting the plat we have cut through about 3 1/2 feet of grey ground, composed of small branches of rich yellow copper, increasing in size as we go down, mixed with a light coloured killas. This being setting-day, I have set to the men to cut the necessary ground for room for a penthouse, and for cutting ground to take up a feeder of water to throw it into the cistern, for 7s. Likewise I have set the engine-shaft to sink 2 fms. under the 60, at 20s. per fathom. Had the water not been so quick I could have got it done cheaper. In western trial shaft, driving south, the ground is of the same promising nature, composed of elvan and quartz, mixed with copper. I have taken the men from this driving at present. Seeing the great necessity of ventilating the 60, I have put them to prepare a place, and at the 40 for sinking on the Gozzen lode to the 60.

CROWLOWM.—J. Roach: In the deep adit west we have just driven through a north and south branch, 18 in. wide, composed of clay-slate, lead, quartz, friable spar, and a little mundic, and spots of lead ore, but I believe the principal portion of the great cross-course is still a little in advance of the end of ground which we hope to intersect at an early date.

CUDDRE.—Francis Pinkey, Edward Dunstan, May 8: We have completed the sinking of Walker's shaft to the 75. The men are now engaged in casing and dividing the shaft from the 60 to the 75, and expect to get the whin-kibble to that level by to-morrow morning; we shall then commence to cut the plat, and make preparations for extending levels both east and west of the shaft on the course of the lode, where we have reason to expect we shall open good tin ground. The lode in the whin sinking below the 60 fm. level, west of the shaft, is very large, and producing some good work for tin. We have cut into the lode 9 ft., and have not yet reached the north wall. In consequence of the lode being very hard at this point, we have commenced sinking the winze in the killas under the lode, where we shall be able to take down the lode to much greater advantage. The 100 cross-cut is extended south, west of Tick's shaft, 3 fms. The ground is still mixed with branches, and spar for driving.

CWM ERFIN.—May 6: The lode in the 45, going west of engine-shaft, is 3 ft. wide, unproductive. The lode in the same level, going east of boundary, is 4 ft. wide, yielding occasional spots of ore, but not to value. The lode in the 20s. in the back of this level, 20 fms. east of boundary, is 4 feet wide, and worth 12 cwt. of ore per fm. The lode in the stope over the back of the same level, 5 fms. east of boundary, yields 1/2 ton of ore per fm. The lode in the 32, going east of boundary, yields 1/2 ton of ore per fm. The lode in the stope over the back of this level, 30 fms. east of boundary, yields 12 cwt. of ore per fm. The lode in the stope in the back of the same level, 25 fms. east of boundary, yields 15 cwt. of ore per fm. The lode in the stope over the back of the same level, 5 fms. east of boundary, is 2 yards wide, worth from 3/4 to 1 ton of ore per fathom. The stope in the back of the same level, about 90 fms. east of cross-cut, yields from 3/4 to 1 ton of ore per fathom. The lode in the whin sinking below the 20, about 15 fms. east of the boundary, yields 1 ton of ore per fm. The lode in the stope over the back of this level is 2 yards wide, worth 1/2 ton of ore per fm. The lode in the stope over the back of the same level, about 150 fms. east of cross-cut, is worth from 3/4 to 1 ton of ore per fathom. The stope in the back of the same level, 25 fms. east of cross-cut, yields 8 to 10 cwt. of ore per fm. The lode in the whin sinking below the 10, 10 fms. 12 cwt. of ore per fathom. The lode in the stope over the back of the 10, 60 fms. east of the cross-cut, is worth 15 cwt. of ore per fathom. We this day sampled 50 tons of lead ore.

DEVON AND CORNWALL UNITED.—T. Nell, May 6: George and Charlotte: In the deep adit level the lode will produce from 4 to 5 tons of ore per fm. We have taken down the lode in the whin sinking below the Midway level; it will produce 3 tons of ore per fm. We have commenced a rise against the winze, in which the lode is of the same value as the end.—William and Mary: The engine-shaft is sunk 10 fms. 3 ft. below the 10, and is going down with the lode standing to the north of shaft. In the 10 east the lode is worth 5 tons of ore per fm. In the stope in the bottom of the deep adit level, west of western winze, the lode is worth 4 tons of ore per fm. In the adit level cross-cut we have met with a small branch, producing a little yellow copper ore, to the south of which the ground is a little more spar for driving. In the 12, west of water-wheel shaft, the lode is still of a very promising character.

DEVON NEW COPPER.—P. Hawke, May 7: The character of the strata in the engine-shaft, 4 fms. below the 58, improves, being composed principally of peach, flookan, and quartz. I have re-set the shaft to nine men, at 15s. per fm., and hope, now that the water is greatly subsided, to progress in the completion of the present sink with equal dispatch as on former occasions. The end recently commenced on the course of the leader to the east of the shaft, in the 88, presents a very kindly appearance; the product from this point indicates a change for the better; the leader consists of mundic and quartz, with spots of yellow copper ore intermixed; its composition is exactly similar to the 78 east, previously to coming upon the copper ore discovered in that level; the end is driven by three men and three lads, at 6s. per fm. We have reached a breasthead or wall in the cross-cut to the west of shaft in the 88; the wall is compact and well defined, with an underlie south of 3 1/2 or 4 feet per fm., and the water issues with great force from the remotest part of the driving; we have nearly completed squaring the ground for the size of the cross-cut upon the wall, and hope in a day or two to break it through, to ascertain partially what is deposited beyond the present point; the cross-cut if driven by six men, at 10s. per fm. The present speed of the engine is nine strokes per minute.

EAST ALFRED CONSOLS.—H. Skewis, W. Arthur, May 7: We have cut the south lode in the 80 cross-cut south of engine-shaft; the lode is 1 foot wide, with good spots of yellow copper ore. There is no change in the 70 west, on the south lode, as the men are now rising in the back of this level. No alteration in any other part of the mine.

EAST BEAM.—J. Webb, May 8: We have driven 15 fms. south from the north lode. During the last twenty-four hours the end has been letting out much water, and we calculate this will continue until we cut into the south lode. If this lode is going down with 2 feet underly, we have 3 fms. further to drive to cut into it. The character of the ground is very congenial for tin.

EAST BUDNICK AND MOUNT.—Wm. H. Reynolds, May 6: In the 17 south the ground is better, and the lode spotted with lead. The lode in the 26 is small, but we think we are near a change.

EAST CARN BREA.—T. Glanville, J. Scholar, May 7: In the 50, driving east of the cross-cut, the lode is 4 feet wide, and will produce 8 tons of ore per fm., worth 7s. per ton; the present end is 40 fms. to the west of the cross-course. In the 80, west of the cross-cut, the lode will produce 3 tons of ore per fathom, worth 7s. per ton. In the 40, east of the cross-cut, the lode will produce 4 tons of ore per fm., worth 7s. per ton. In the 60, east of the cross-course, the middle lode will produce 2 tons of ore per fm., worth 10s. per ton. We are again sinking the engine-shaft below the 50.

EAST DEVON GREAT CONSOLS.—T. Richards, May 6: In the 40 the ground has become softer, with a little water issuing from the end, from which I anticipate we are getting near the lode. In the engine-shaft good progress is being made in sinking. The engine and pitwork in good order, and working well.

EAST GUNNIS LAKE AND SOUTH BEDFORD CONSOLS.—William G. Gard: The lode in the 36 east has improved, and will yield 4 tons of good ore per fm. There is no change in any other part of the mine to notice. We have sampled 103 tons, produce 4%; 84 tons, produce 7 1/2 tons.

EAST JANE.—J. Vercoe, H. B. Vercoe, May 6: Western Lode: The lode in the adit end is from 5 to 6 ft. wide, composed of flookan, carbonate of iron, quartz, and lead, and will produce of the latter about 12 cwt. per fm.; there has been a temporary falling off in the value of the lode, owing to its being split, but the branches are now coming together, and no doubt will further improve in a day or two. The stope in the back of this level will produce about 5 cwt. of lead per fathom. The new shaft is sunk about 14 fms. from surface; the lode is about 2 ft. wide, producing occasional stones of lead.—Middle Lode: The lode in the adit end is becoming more settled as it has got the influence of the cross-course; it is now about 1 ft. wide, composed of gossan, flookan, quartz, and a little mundic. We have sold 20 tons of lead to the trustees of the Treffry Estate, at 13s. 2s. per ton. The engineers are making good progress in the erection of the engine.

EAST PROVIDENCE.—T. Uren, May 7: Boorman's shaft is sunk 4 fms. below the 40; the lode here is at present poor. The lode in the 40, west of Boorman's shaft, is a little improved, now worth 5s. per fm. We have cut the Providence Mines Comfort cross-lode in the 30 fm. level, west of Boorman's shaft; this lode is producing good stones of tin, but as yet there is not sufficient ground open to prove its value; it is likely, however, to be very valuable.

EAST ROSEWARNE.—J. James, May 3: In the 55 east the lode is 18 inches wide, worth 15s. per fm. The stope over the said level is worth 13s. per fm. We shall commence Hallett's shaft below this level in the course of next week, where we calculate to open some good ore ground. In the 55 west the lode is about 1 foot wide, composed of quartz, flookan, and stones of copper ore; we have confidence in this being a good lode as we approach the dip of the ore as seen in the bottom of the 43. We have re-set the winze below the 45 west; the water is but little, being partially drained by the 55; the lode in this winze is worth 24s. per fm. In the 43 cross-cut the ground is harder than for some weeks past. Our pitches in the upper levels are declining, but the prospects at the bottom of the mine are chearing.

EAST WHEAL MARTHA.—J. Richards, May 8: The lode in the adit level, driving east of the engine-shaft, is 6 feet wide, composed of gossan, quartz, mundic, &c.—a very fine lode indeed.

EAST TRESKERBY.—J. Nancarrow, May 3: The ground both in the 40 cross-cut and the flat-rod shaft is still highly congenial for copper, but having been harder than before, we have not in the past month made the usual progress; still there are indications of improvement, which in all probability will shortly take place.

EAST WHEAL AGAR.—F. Fryer, May 3: The adit level, east of Dunsford's shaft, is presenting an improved appearance since the meeting; set at 71. 17s., former price 87. 10s. The 15 east is also changing for the better, and I am of the opinion it will still further improve as we approach the winze referred to in our report; present price 71. 10s., former price 91. The 15 west is driven east 9 ft.; the driving has, and is still presenting, such appearance as justify one going deeper, which cannot be done to any advantage without the aid of a small engine for pumping and winding. I may as well mention that at this point in the adit level the lode and channel of ground are not to be surpassed, if we may judge from appearance, as regards indications for the production of copper. After again giving this speculation my best attention, not only the lode we are now driving on, but others which we have seen in the cross-cut, warrant the erection of an engine, and I shall lay the same before the committee for their approval, and those who are not desirous of making the outlay, I will take their interest, at the rate spent since I have had the mine, with 5 per cent. added.

EAST WHEAL GHENVILLE.—G. R. Odgers, Wm. Bennetts, May 7: There is no particular alteration in the shaft since our advice on Monday. At the 45 east we are getting out of the influence of the cross-course, where there is a good branch of ore, yielding about 2 tons per fm.—a kindly lode. There is a good lode of tin in the 45 west, worth 10s. per fm. All the other places are looking much the same.

EAST WHEAL RUSSELL.—John Goldsworthy, May 7: Horner's Shaft: The lode in the 120 east is 2 ft. wide, composed of capel, quartz, mundic, and flookan; ground favourable for progress. In the 110 east, cross-cutting south, the ground has been capely and hard, and letting out water freely, which makes the progress slow. In Frewin's cross-cut north, in the 110, the lode has been cut in two about 5 ft., composed of capel, quartz, prian, iron, and a little rich grey copper ore—a very kind lode, and letting out a quantity of water. In the 100 east the lode is 2 ft. wide, composed of capel, quartz, mundic, peach, and rich stones of yellow and black oxide of copper ore. Vigar's No. 2 rise, in the 120 east is 2 ft. wide, composed of capel, quartz, mundic, and flookan; ground favourable for progress. In the 110 east, cross-cutting south, the ground has been capely and hard, and letting out water freely, which makes the progress slow. 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fathom. The 23 fm. level is driving at 22. 10s. per fm., but the lode is not yet cut.—**South Lodge:** At the 20 fm. level from surface we are driving east of the south shaft, at 14. 15s. per fm.; the lode will just pay for driving.—**Standard Lodge:** The 19 fm. level is driving east, at 15s. per fm.; the lode is small and poor. In our tribute department we have thirty-seven men employed, at tributes varying from 9s. to 12s. in 1s., the men paying all expenses. At surface the calciner is working, and answers its purpose satisfactorily. All the men are engaged in setting lodes, stays, castings, &c., at Dunford's shaft, which will be completed by the end of this week; afterwards the cross-cuts north and south will be driven into the lodes with all speed.

WHEAL HARRIETT.—**S. Williams, May 3:** The ground in the engine-shaft is without change to notice since last reported. The lode in the 115 end is divided with a horse of granite. The north part producing stones of tin. The 100 winch has not been sunk for the week. The ground in Alexander's shaft continues favourable for sinking; the shaft is now sunk 10 fm. from surface. Alexander's lode, in the deep adit end, is not looking so well to day as last week, worth 10s. per fm. The lode in the rise above the deep adit is worth for copper ore 10s. per fm.; this lode is very changeable, and, no doubt, in a few feet rising and driving it will resume its former value.

WHEAL HARRIS.—**J. Pryor, May 5:** Since my last report the cross-cut has been continued eastward, but has not been driven with that dispatch I calculated on, owing to the ground being a little harder than expected; however, there is at present a favourable change, showing indications of being near the lode, having branches of spar and barytes, spotted with muriac and lead, from which it would appear we shall have a good lode when cut.

WHEAL HOPE.—**W. H. Reynolds, May 5:** We have fixed the plunger at the 20, and are now forking below the 28 as fast as possible. I hope to see the 38 in six or seven days. The ends and the pitches are just as reported last week.

WHEAL KITTY (St. Agnes).—**R. Pryor, sen., J. Nicholas, S. Davey, May 3:** We have this day cut into a lode or branch in the cross-cut south of the engine-shaft at the 100 east, but cannot see quite enough as yet to say much about it. The lode in the 90 east is worth 8s. per fm. The lode in the 82 east is worth 12s. per fm.; we are daily expecting to communicate the rise behind this end to the level above. The lode at Holgate's shaft in the 65 west is 1 ft. wide, producing saving work for tin. The lode in the 54 west is worth 6s. per fm., the lode in this level, west of cross-cut, on Pryor's lode, is 3½ ft. wide, worth 20s. per fm. The stopes behind this end continue to be worth 16s. per fathom; the lode in this level, east of cross-cut, on Pryor's lode, is still worth 13s. per fm. The driving of the 44 and 54 cross-cuts is progressing very favourably. We have still in the former a good branch of tin, carrying the head 90° to the west of south, the results of which, when falling in with the lode, we are somewhat sanguine about.

WHEAL NORRIS.—**J. Andrews, J. Nance, May 5:** We beg to inform you of an improvement in the 15 end, east of Carter's shaft, on No. 3 lode, which is 1 ft. wide, carrying a leader 2 in. wide, very rich for tin. Calculating from the bunch as it is in the end now, we think it will turn out 4 or 5 cwt. of tin per fm., and of excellent quality. We are almost afraid to speak of it when we get a good stone of tin, as in times past we have had several good nests of tin which have been of short duration; but we hope this will continue longer. All we can say is, what we have in the end now is the best branch of tin for its size that we have ever seen in the mine. All the other parts are without change.

WHEAL SICILY.—**T. Hodge, May 7:** The lode in the 17, south of engine-shaft, on the west lode, is disordered with killas at present, and of no value. In the 17, north of whim-shaft, the lode is 20 in. wide, producing lead throughout. In the 17 west, on the east and west lode, the lode is 9 in. wide, composed of soft spar, prian, flockan, muriac, and lead—kindly lode. In the adit, south of new shaft, on the east lode, the lode is split into two parts by a horse of killas; each branch is made up of soft spar, prian, gossan, and muriac—looking kindly. There seems to be a doubt whether we are working on the same lode as the one that is so productive in the neighbouring sett, as that lode is said to be gone off to the west, and if this is the case, our 17 end west, which is being pushed on with all speed, will shortly intersect it. We are opening ground fast, and may meet with an improvement any day.

WHEAL SIDNEY.—**Wm. Edwards, May 6:** There is no change to notice since the report for the general meeting. The surface operations are progressing satisfactorily. The tin stuff now in course of stamping is yielding according to samples taken, and quite equal to expectations.

WHEAL TRELLAWNY.—**F. Pryor, R. Pryor, May 3:** Our pay and setting went off as usual, very well. The cross-cut in the 182 is driven 5 fm. The 172 south is worth 3s. per fm.; the 172 north is worth 5s. per fm.; these levels are driven from Smith's shaft. The 162, north of Chippendale's, is worth about 5s. per fm. The 152 north, at the same shaft, is improving, as well as the appearance of the lode, and now worth 4s. per fm. Our pitches are much the same as for some time past. We shall sample at our usual time about 60 tons of No. 1 parcel. Our machinery is in good order.

WHEAL UNION.—**T. Gianville, May 7:** In the eastern shaft, sinking below the 30, the lode is worth 20s. per fm. for tin. In the 18, east of the eastern shaft, the lode is 4 ft. wide, producing stones of copper ore. There is nothing to report on in the other parts of the mine.

WHEAL UNITY CONSOLS.—**W. H. Reynolds, May 6:** The lode in the 85 east still yields ½ ton of ore per fm. In the 75 west we are driving by the side of the lode, which is letting out pretty much water, and we expect an improvement soon. The 50 west is still in elvan, but more favourable for driving. In the 50 west, on the south branch or lode, there is a little ore, and the water increasing. We have put a man and boy to drive the 40 east, where the lode is large and promising.

YARNER.—**R. Barkell, May 7:** In extending the cross-cut at the 40 east we have intersected another branch, from 3 to 4 inches wide, of good quality ore; we think this one of the best discoveries made in Yarner, as it is the deepest point. The stopes in the back of the 30 are yielding the one from 2 to 3 tons and the other from 3 to 4 tons per fm. There is no other change.

EAST WHEAL SETON.—This mine adjoins Wheal Seton on the east, the relative position of the two being the same as that of New Seton and West Seton. It is traversed by the same lodes and elvan courses, and is in the same channel of clay-slate, greenstone, &c., as the other Setons. The junction of the lode and elvan course occurs very near the surface, which is a very important point, for it has been about such junctions that the great masses of copper ore have been found in the adjoining mines of North and South Crofty, East Pool, North Pool, North Roscar, Wheal Seton, and West Seton. In the old mine of South Roscar, which is on parallel lodes, but near at hand, and in rock having precisely the same geological features, the junction of the lode and elvan took place near the surface, exactly as it does in East Wheal Seton, and at this point a course of copper ore was met with from which large profits were made at once, and over 30,000, divided, without the aid of any machinery except the "wind's tackle," worked by hand, by which the ore was drawn to the surface; and as the lode was followed to deeper points by the aid of the steam-engine, still greater profits were made, amounting, it is supposed, to over 200,000. The driving of the adit level eastward, in East Wheal Seton, towards the point at which the junction of the lode and elvan takes place, has been hindered for some months, owing to the eastern part of the adit not having been communicated to the western part, or outlet, and the winter rains having filled it with water; the water is, however, not rapidly draining off, and the driving of the adit eastward will, therefore, be resumed within a few days, from which operation discoveries of the greatest value will probably be made. The communication between the western and the eastern parts of the adit will be effected within a few weeks, so that no future delay will be occasioned by the water. The mining district in which East Wheal Seton is situated is a very remarkable one, for the mines comprising it have been, with scarcely any exception, all rich, and profitable; whereas in nearly every other district, whether in Cornwall or elsewhere, the successful mines have been few compared with those which have been of an opposite character. The mines by which East Wheal Seton is more immediately surrounded, and which have been already named, have all given very large profits on small outlay. The two progressive mines of the Seton group are New Seton and East Wheal Seton, respecting which high expectations are entertained, and deservedly so, seeing that they possess all the most favourable features of the older mines of the same locality, which have already given such large profits, and are in such close proximity to those celebrated mines Wheal Seton and West Seton.

GREAT BRIGAN.—**Capt. Trelease reports that the adit shaft, on North Tresebury lode, was holed to the deep adit level, and the men were now engaged in cutting plat. The lode at this level, driving east of said shaft, was 2 ft. wide, without change to notice. They hoped soon to be able to commence operations in the trial shaft, which was sunk to the deep adit (which was 9 fms. 3 ft. below the shallow adit), where the lode was large, and worth for copper ore about 12s. per fathom. None of this lode was yet taken away below the shallow adit level in sinking this shaft from surface to the latter level, which was only 16 fms. They had returned from a few fathoms east and west of the above shaft 300 ft. worth of copper ore; this alone is sufficient to warrant a spirited trial of the lode in this part of the mine.**

BROOKWOOD MINE.—The neighbourhood of Ashburton promises to fulfil the high expectations that were formed of it some three or four years since. The Wheal Emma, notwithstanding its most curious (to say the least of it) management, is in a fair way to become a great mine. The unfortunate speculation at the Queen of Dart, from the fault of the mine itself, proved ruinous. The same observation may be applied to the Arundel United and other mines. Mismanagement has been the bane of the district now, however, a better era appears to be dawning. The Wheal Emma was never looking better: the doubts as to the lode holding good in depth are annihilated by facts, in the shape of the sales of ore. The Brookwood Mine is the most promising affair that has been brought forward for many years: the ore from this mine sells at a price that a few years since would scarcely be credited for a Devonshire mine. The tin mines in this locality are also deservedly attracting great attention. No doubt, as ever long, Ashburton will be like Camborne, a great mining centre for tin and copper produce, when the Brookwood, the Emma, and two or three others, will be as celebrated as Dolcoath, Cook's Kitchen, and some other great mines, whose names are as familiar as "Household Words." A recent visit has caused us to make these remarks, more especially as to the Brookwood Mine, which we unhesitatingly pronounce to be a star in the ascendant.

WHEAL PAR (Luxulyan).—At a meeting, held at St. Blazey, on Friday last, the accounts having been duly passed, arrangements were made for the immediate erection of the engine, which is already delivered on the mine. From the rich stones of tin shown at the meeting, the adventurers seemed in high spirits at the prospects of a speedy return for their outlay. Strong hopes are entertained that Wheal Par will make one of the leading mines of the district, for tin such as has been found in the old men's arches has seldom been heard of in the annals of Cornish mining.

NORTH WHEAL EXMOUTH MINING COMPANY.—The motion in this matter, which was made to discharge the winding-up order on the allegation that it had been obtained on the petition of a holder of less than the requisite number of shares, was heard in the Rols Court on Thursday. Mr. Roxburgh appeared for the motion; Mr. Roberts and Mr. C. Swanson were for the first petitioner, and the official manager who had been nominated under the order now objected to; and Mr. T. Wood was for a new petition, which was heard with the motion. His Honour discharged the order, and now made another on the present petition. Costs of all parties out of the estate.

CUMBERLAND BLACK-LEAD MINE COMPANY (Limited).—Creditors are required to prove their debts before Mr. Commissioner Evans, on May 20.

COMPRESSED COAL COMPANY.—Mr. E. W. Edwards has been appointed liquidator of this company, now in course of winding-up, by the Court of Bankruptcy.

GREAT NORTHERN AND MIDLAND COAL COMPANY (Limited).—Mr. Commissioner Goulburn has appointed May 23 to settle the list of contributors.

IRISH WEST COAST RAILWAY COMPANY.—Mr. Henry Croydill has been appointed by the Court of Chancery official manager of this company.

The Metropolitan Railway Carriage and Wagon Company have entered into arrangements with the well-known firm of Messrs. Joseph Wright and Son, of Salford, for the transfer of their business to the company. Immediately on the completion of this arrangement the company will secure a large connexion, and be in a position to commence business. An official notification intimates that, "the terms upon which the transfer has been effected are most advantageous to the company. No charge is made for the goodwill; the stock is to be taken at a valuation, and the vendors agree to accept 10,000s. of the purchase money in shares of the company."

* * * With last week's Journal a SUPPLEMENTAL SHEET was given, which contains—Prof. Morris on the Principles of Geology—the Geology of the Border: two papers, by Messrs. E. F. Boyd and E. Gibbons, read at the North of England Institute of Mining Engineers—On Winding: by Mr. J. Hocking, jun., read at the Miners' Association of Cornwall and Devon—the North Staffordshire Coal Field: by Mr. John Bradbury, read at the Manchester Geological Society—the Geological Formation of the Earth: by Mr. N. Ennor, with engravings—Plan of the North Pool Mining District.

* * * With the Journal of April 8 we gave a SUPPLEMENTAL SHEET, which contains the first part of a very comprehensive paper on Accidents in Coal Mines—the proceedings of the British Association for the Relief of British Miners—the Association for the Prevention of Steam-boiler Explosions—Wicklow Copper Mining Company (meeting)—Quarterly Sales of Copper Ores at Cornwall and Swansea—Foreign Mining and Metallurgy—A Condensed Air Locomotive, &c.

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, May 9, 1862.

COPPER.	£ s. d.	BRASS.	Per lb.
Best selected...p. ton	101 0 0	Sheets	10d.-11d.
"....."	98 0 0	Wire	2½d.-3d.
Title	98 0 0	Tubes	11d.-12½d.
Burra Burra	95 0 0		
Copiapo	"		
" f. o. b. p. lb.	0 1 0½		
" ditto tubes	0 1 1		
" ditto, &c.	0 0 11		
Sheeting & bolts	0 1 11		
Bottoms	0 1 11½		
" ditto (Exchange)	0 0 9½		
IRON.	Per Ton.		
Bars, Welsh, in London ..	6 5 0		
" to arrive	7 15 6		
Nail rods	7 0 0		
" Stafford, in London ..	7 0 0		
Bars, ditto	7 5 0		
Hoops, ditto	8 5 0		
Sheets, single	9 0 0		
Pig, No. 1, in Wales ..	3 0 0		
Redined metal, ditto	4 0 0		
Bars, common, ditto	5 2 6		
Ditto, merchant, in Tees ..	6 10 0		
Ditto, railway, in Wales ..	5 5 0		
Ditto, Swed. in London ..	11 15 0		
To arrive	11 0 0-11 5 0		
Pig, No. 1, in Clyde ..	2 8 0		
Ditto, f. o. b. in Tees ..	—		
Ditto, forge, f. o. b. in Tees ..	—		
Staffordshire Forge Pig ..	3 10 0		
Welsh Forge Pig	—		
LEAD.	Per Ton.		
English Pig	19 15 0		
Ditto sheet	20 10 0		
Ditto red lead	21 10 0		
Ditto white	28 10 0		
Ditto patent shot	22 15 0		
Spanish	18 15 0-19 0		
At the works, 1s. to 1s. 6d. per box less.			

FOREIGN STEEL.	Per Ton.
Swedish, in kgs (rolled)	15 10-16 0 0
" (hammered)	17 0 0-18 0 0
Ditto, in faggots	17 0 0-18 0 0
English, Spring	18 0 0-23 0 0
Bessemer, Engineers' Tool ..	14 0 0
" Spindle	30 0 0
QUICKSILVER.	7 0 0
" per lb.	0 0 0
SPLITER.	Per Ton.
Foreign	18 5 0
To arrive	18 5 0-18 10 0
ZINC.	Per Ton.
In sheets	24 0 0
TIN.	Per Ton.
English, blocks	114 0 0
Ditto, Bars (in barrels)	115 0 0
Ditto, Redined	119 0 0
Ditto, merchant, in Tees ..	120 0 0
Ditto, railway, in Wales ..	123 0 0 (nom.)
Straits	113 0 0
TIN-PLATES.	Per Ton.
IC Charcoal, 1st qua, p. bx ..	1 8 0-1 9 0
IX Ditto 1st quality	1 14 0-1 15 0
IC Ditto 2d quality	1 4 6-1 6 6
IX Ditto 2d quality	1 11 0-1 13 0
IC Coke	1 2 0
" 18 0-20 0	
Canada plates	p. ton 12 10 0-13 0 0
In London ..	20s. less at the works.
Yellow Metal Sheathing	p. lb. 9d.
Indian Charcoal Pigs	6 12 6-6 15 0
In London	6 12 6-6 15 0

REMARKS.—There is but little change to notice in the aspect of the Metal Market generally. Considerable difficulty is still experienced by sellers wishing to realise, as there are but few buyers in the market at current rates; and it is only when sellers are willing to make concessions in price that purchasers can be found for second-hand lots. The latest accounts from India show no improvement in the market there, and there is comparatively but little demand either for China or America. The home trade is hardly so active as some little time since, but it is still good.

MAY 10, 1862.]

immediate profit, by charging the public large premiums, and keeping management in their own hands or in those of their toadies.

COAL MARKET.—On Monday the arrival of 85 fresh ships caused a market for house coal, and prices gave way 6d. per ton. Hartley's manufacturers' were in fair request, and fully maintained previous rates. Best house coal, 16s. to 17s.; seconds, 13s. 6d. to 14s. 6d.; Hartley's, 13s. 6d. to 14s. 9d.; manufacturers', 11s. 6d. to 13s. 6d. per ton.

On Wednesday 31 fresh ships arrived; the tone of the market for the coal was heavy, at Monday's prices. Hartley's were in request, advanced 6d. per ton; manufacturers' without alteration.—On Friday we were 24 arrivals. The market for house coal was much depressed, the little business done was at previous quotations for all descriptions. Well Walsend, 17s.; Eden Main, 15s.; Hartley's, 13s. to 15s. 6d.; manufacturers', 11s. 6d. to 13s. 6d. per ton: 23 cargoes unsold; 120 at sea.

Redruth Ticketing, on Thursday, 2876 tons of ore were sold, realising 15,9721. 11s. 0d. The particulars of the sale were—Average standard, 12s. 2d.; average produce, 6s.; average price per ton, 5l. 11s.; quantity of copper, 192 tons 9 cwt. The following are the particulars:—

Tons.	Standard.	Produce.	Price per ton.	Ore copper.
2558	122 12 0	7	£17 0	£51 13 0
15	124 7 0	64	19 6	80 3 6
15	5286	125 16 0	4 17 6	80 9 6
15	3242	124 8 0	5 4 0	81 7 0
15	3550	124 3 0	5 11 0	85 1 0
15	2576	124 3 0	64	8 0

Compared with the sale of last week, the advance has been in the standard, and in the price per ton of ore about 1s. 6d. Compared with the

preceding sale of last month, the standard is about the same.

South Wheal Frances meeting, on Monday (Mr. R. R. Broad in the chair), the accounts for Feb. and March showed—Balance last audit, 22081. 10s. 2d.; ore and tin sold, 25721. 17s. 5d.—Mine cost, merchants' bills, and sundries, 21191. 2s. 8d.; leaving credit balance, 26291. 4s. 11d. The profit on the two months' working was 4981. (1s. per share) was declared, and carried to credit of next account. Details in another column.

North Treskerby Mine meeting, on Tuesday, the accounts for Feb. and March showed—Tinwork and wages, 10171. 18s.; tributes' balances, 1807. 14s. 8d.; miners' bills, 4441. 8s. 11d.; dues, 731. 3s. 8d.—Credit last audit, 15s. 1d.; sale of tin ores, 1311. 6s. 7d.; copper ores, 11961. 1s. 3d.; leaving to debt, 6s. 4d. The loss on the two months' working was 3281. 17s. 5d. Capt. J. Tregoning reported that the tribute pitches throughout the mine are looking well, and at our usual time about 325 tons of rather better quality ore than our

On the whole, we consider the mine never looked better, and bids fair to improve.

West Pen Consols (adjourned) meeting, on Tuesday (Mr. Leonard Kite in the chair), the accounts made up to date showed a balance of assets over liabilities of 12s. 10d. A call of 1s. per share was made. A resolution was passed summoning a special meeting for the 21st inst., to take into consideration the advisability of closing the mine and dissolving the company, or to provide capital for the further prosecution of the undertaking. Details in another column.

Redruth Ticketing, on Tuesday, the accounts showed a balance of 6992. 2s. 9d. A call of 2s. 6d. per share was made. Capts. G. R. Odgers & J. Bennett report that "The number of hands employed are—underground 36 men; surface, including engine-men, 22, 10 men, 7 boys, and 12 girls. The engine and machinery are working satisfactorily, keeping the water at about three strokes per minute. We expect to get the stamp to work in about three weeks, after which our sales will really increase, because we shall then be enabled to stop our ground to advantage, which of course more or less tin. In conclusion, we beg to repeat, seeing our promising lode we have always had in this mine, with the mass of gossan now 33 feet, and the metallurgical character of the lode generally, that in our opinion our chances are indeed favourable for this making a valuable and lasting mine."

Cefn Cilcain Mining Company meeting, on Tuesday, the directors

called a 2s. per share on the shares of the company.

East Margaret Mine meeting, on April 30, the accounts showed a balance of 1851. The salary of the manager, Thomas Anthony, is to be £10 10s. per month, and that of Capt. William Williams, 1s. per month. Capt. T. Anthony and W. Williams report that, "On the whole, the improvements in the quarter, and the machinery being good and powerful we in a few months bring the concern into good and satisfactory working order."

Glynllifon Mine meeting, on Wednesday, the accounts for the three months ending Feb. showed—Labour cost, 1181. 18s. 5d.; merchants' bills, 4271. 9s. 7d. 1s. 14s. 7d.—Black tin and copper ore sold, and sundries, 15474. 1s. 1d. 1s. leaving balance, being loss on the three months' working, 1801. 19s. 8d. The agents' report

found among our Mining Correspondence.

Glamorgan and St. Asaph Mine meeting, on Tuesday, the accounts

showed—Mine cost, merchants' bills, and sundries, 6121. 8s. 9d.—Leaving credit balance, 41. 7s. 10d.; copper ore sold (deducting 12s. 9s. 8d. at 1s-18d.), 6s. 7d.; loss on the month, 3581. 16s. 4d. A call of 1s. per share was made.

John Davy and John Mitchell reported upon the various points of operation.

North Hafod Mine (first general) meeting, on Monday (Mr. Lionel Brough in the chair), a call of 5s. per share was made. Details in another column.

South Devon Iron and General Mining Company (special) meeting, on May 3 (Mr. White in the chair), it was proposed to form a new company, in the shape of the Atlas Mining and Smelting Company, with a capital of 35,000*l.* in shares of 1*l.* each. Purchase-money in cash and shares, 17,000*l.*; bonus to late shareholders (say) 10,000*l.*; bonus to holders of preference shares, 3000*l.*; working capital, 5000*l.* Total, 35,000*l.* Details in another column.

The Bampfylde Copper Mining Company meeting, on Wednesday, the accounts for the six months ending April will show—Balance last audit, 10s. 4d.; loan, 700*l.*; copper ore sold, 7402. 17s.; sundries, 222. 19s. 6d.—16551. 16s. 9d. The balance of assets over liabilities was 2031. 12s. 5d. The committee, in their report, congratulate the shareholders upon the result of the six months' working, and the aid of any further capital from the shareholders, the present loan and all liabilities may very soon be paid off, and a profitable mine calculated upon, with confidence than ever. The shares relinquished in 1857, and now on hand, will be offered to the highest bidder. The deputation of shareholders (Messrs. Hand, Tagger, Thomas, and Milne) who have visited the mine "express their unanimous satisfaction with the general arrangements at the mine, and the prospects of the shareholders." Capt. Joseph Pope reports upon the various points of operation, and that from the indications these present for improving he considers the prospects more cheering than they have hitherto been. The machinery throughout the mine is working very well.

FOREST OF DEAN—TWO FATAL COLLIERY ACCIDENTS.—On Saturday a sad accident happened at the New Fawley Colliery, the property of the Park End Coal Company, to a man named George, living at the Lane End, near Coleford. The poor fellow was employed in getting coal, when a "bell," or globular stone, fell from the stone roof, or top, upon him, and so seriously injured him that he died on the road home, without being carried by his fellow-workmen. He was a man of very good character, about 40 years of age, and has left a widow and two children. An exactly similar accident happened on the same day at the New Strip-and-at-it Colliery, the property of Messrs. J. and H. Harris, to a lad named Weaver, about 12 years of age, who died before he could be extricated. In both cases inquest were held on Tuesday, before Mr. James Teague, coroner for the district, and adjourned to Saturday (this day), for the attendance of the Government Inspector, Mr. Lionel Brough, when, there is no doubt, the verdict will be "Accidental Death."

MINING WATER RIGHTS.—A novel proceeding took place at Huckwroth Bridge, near Tavistock, on Wednesday, which is of great importance to the mining community, especially in the locality referred to. The River Walkham flows through the valley, and has for some years past been claimed by Sir Massey Lopes, to whom it lies between the Arrevalo—which is now yielding from 30,000*l.* to 30,000*l.* per annum profit to its Mexican owner—and the mines of Rosario, Jesus, and San Rafael, which have also produced enormous profits. The mine is 70 miles north of the city of Mexico, and is in the midst of an excellent mining population, the present owner holding it from the Government for an unlimited period, subject to a royalty of 5 per cent. upon the value of the silver produced. The Arrevalo adit now making will drain the Laguna Mine to the depth of at least 300 yards, and the ore, which are peculiarly adapted to the amalgamation process, by which the silver can be easily extracted from the ore, are of the most "docile" character. Mr. Rule transfers two-thirds of the property for 1200*l.*, and it is calculated that from 4000*l.* to 5000*l.* will be sufficient for fully developing the mine.

THE ROYAL COMMISSION OF MINES.—During the past week the Commissioners appointed to make inquiries into the state of the British mines have been pursuing their investigations in the Western locality (including the St. Just district), where every facility has been afforded them. The different agents, captains, adventurers, and the gentlemen of the neighbourhood interested in mining, have given their valuable aid in promoting the Commissioners' investigation, and so far as these have gone the greatest satisfaction has been the result. Lord Kinmel and panel left for London four days since, whilst the secretary to the Commission (Mr. Temple) remains longer. The party has been staying at the Queen's, Penzance, and intend returning to the locality some time during the summer.

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THE LAGUNA SILVER MINING COMPANY (LIMITED).

Capital £20,000, in 4000 shares of £5 each.

Deposit, £1 per share to be paid on application, £1 in three months from date of allotment, and the remainder in instalments of £1 if required.

DIRECTORS.

JOHN WORMALD, Esq., Brockworth Manor, Gloucestershire.

CHARLES RULE, Esq. (late of Mexico), Falmouth.

E. EDWARDS, Esq., C.E., 1, York-buildings, Adelphi.

MINE DIRECTOR.—J. R. Rule, Esq., Mineral del Chico.

AGENTS IN MEXICO.—Messrs. Bates, Barton, and Co.

BANKERS.—Messrs. Roberts, Lubbock, and Co.

BROKERS.—George S. Herbert, Esq., 73, Old Broad-street.

SECRETARY (pro tem.)—Mr. F. Henderson Grove.

TEMPORARY OFFICES, -10, BROAD STREET BUILDINGS, CITY.

The Laguna Mine is on the *vea madre*, or mother vein of El Chico, which varies in width from 10 to 16 yards, and it lies between the Arevalo Mine on the West (which in the hands of its Mexican owner now produces £20,000 to £30,000 annual profits), and upon the East the Rosario Mine, and the Jesus and San Rafael Mine, which have also produced enormous profits.

It will be seen, therefore, that it would be impossible for the Laguna Mine to be more favourably situated, and were it untouched it would offer every chance of success, but this chance seems turned into something very like certainty by the discovery of ore in the shaft, which has been sunk 25 yards on the vein (here about 10 yards wide), at a point close to the boundary of the rich Arevalo Mine, and at this little depth the vein is precisely similar in character to the latter, and contains silver ore throughout its entire width.

This mine is situated in the mineral of El Chico, 70 miles north of the City of Mexico. It is in an undisturbed locality, with an excellent mining population. The present owner has obtained from the Government the license of the usual extent, with the right to hold it for an unlimited period, subject to the usual payment of £2 per cent. on the value of the silver produced.

The district of El Chico has been one of the most productive in Mexico, and although it abounds in mineral veins, yet it has but one great vein, which is called the "Veta Madre," or Mother vein, and is about 35 feet wide, on an average. The mines of the greatest celebrity are on it, and Laguna stands in the midst of them, in virgin ground. Its having remained until lately undeveloped, is owing to an error of the Mexicans at a former period, who sunk the shaft perpendicularly, while the vein had a southern declination of about 1 ft. in a fathom; the result was that the shaft left the vein entirely, and the mine was declared of no value, and abandoned accordingly.

Having been found in this state by the present owner, he proceeded to sink the shaft on the course of the vein, and found it to retain its full width, the ore commencing from the surface, and extending all the way down, a depth of 78 feet, and to have ore disseminated throughout. In the course of this operation the vein much improved, as the ore became more massive, with a larger proportion of silver; and 30 tons of ore were raised, which produced 2160 ozs. of silver.

An adit level is now being made to the Arevalo Mine, which, when completed, will drain the Laguna Mine to a depth of 300 yards and upwards, which will be of great benefit.

It is now proposed to sink the shaft a few fathoms deeper, and then drive levels east and west, and should the ore continue as it was left in the bottom of the shaft when the mine was suspended, there would be a commencement of profits, with a prospect of their increasing, as the mines on this vein have been characterised by great durability. For instance, the Mine of Arevalo, whose workings are within 50 fathoms west of the Laguna shaft, has continued its operations without interruption for upwards of 100 years, during which period it has given profits to the amount of many millions of dollars, and is still a rich mine. The similarity in the appearance of this mine to that of Arevalo, at the same depth, is very striking, and being on the same vein there is little doubt that Laguna will give a similar result. This remark applies equally to the mine adjoining it on the east, viz.—Rosario, Jesus, and San Rafael, which are among the most celebrated mines of Mexico, and which gave to Spain such enormous wealth, and added so materially to her greatness.

It is particularly worth of remark that the ores of Laguna are of the most "docile" character, and peculiarly adapted to the amalgamation process, by which the silver can easily be extracted from the ores.

Extensive smelting and amalgamation works are close at hand, where the ores can be reduced at a low price, and there is much water-power available, and the company will, therefore, have no need to erect works of their own.

The owner, Mr. J. Richard Rule, transfers two-thirds of the property to the present company for £1200, the amount expended by him, agreeing to superintend the operations until the company may think proper to appoint another person.

It is estimated that an additional sum of £1000 to £2000 will be amply sufficient to bring the mine into condition to yield the most satisfactory results to the shareholders.

Prospectuses and forms of application may be obtained of the brokers, solicitors, or at the temporary offices of the company.

The deposit of £1 per share must be paid to the company's bankers previously to the application being sent in; this sum will be returned in full if a sufficient number of shares be not applied for, or if no allotment be made to the applicant.

PRELIMINARY NOTICE.

THE GWERN-Y-MYNYDD LEAD MINING COMPANY.

The Lords of Mold having agreed to grant a lease of the old Gwern-y-Mynydd and Cat-hole Mines, near Mold (at a royalty of 1-12th for the first moiety of a term of 21 years, and 1-12th for the second moiety), it is intended immediately to commence working the same, together with the valuable lands adjoining, belonging to S. H. Thompson, Esq., of Thingwall, near Liverpool, and Edward Wain, Esq., of Vron Hall, near Mold, which have also been engaged on the same terms.

It is confidently expected that a capital of £10,000 will be abundant for this purpose, and it is proposed to raise that sum by the issue of 500 shares of £20 each; of which 10s. per share shall be paid as a deposit on application, £1 on allotment, £4 when machinery is procured, and the remainder as required in calls of £1 per share, at intervals of not less than three months, or as shall hereafter be arranged.

A large portion of the capital has already been subscribed, and as soon as the remaining shares are apportioned, a meeting will be called to adopt rules, appoint directors, &c. The company will be placed under the Limited Liability Act.

Applications for shares to be made before the 20th of May next, to A. T. ROBERTS, Esq., Mold, the solicitor of the company, or Mr. JOHN BONKERS, Mount Pleasant Mine, Mold, secretary *pro tem.*; and the deposits (as above) to be paid into the London and Westminster Bank, London; the Union Bank, Liverpool; to be placed to the credit of the company, at the National Provincial Bank, Mold, or at the last-named bank.

The following report, prepared by Mr. Robert Williams, manager of the Mount Pleasant Mine (who is thoroughly acquainted with the neighbourhood), will show the valuable results of former operations, and the causes of their being suspended, the plans suggested by him for future action, and the confident expectations he entertains of the success of the undertaking.—

Ty-uoch, Mold, March 31, 1862.—These mines and surrounding localities have been well-known to me for upwards of 35 years. Having been connected with most of the mines in the Mold district, and resided therein during the whole of that period, it is with some degree of confidence that I have undertaken to report upon the Gwern-y-Mynydd Mine, being a portion of that extensive range of mines now more particularly claiming the attention of the mining public. The Gwern-y-Mynydd Mine is situated about one mile and a half south-west of the town of Mold, in the heart of the mineral district on the north side of which, and within a distance of about two miles, we have the following important mines, exclusive of small adventures, viz.:—The Fawng and Fron Fawng, which returned about 20,000 tons of lead ore, and made a profit of £100,000, when lead was selling at a very low price. Next come the Pant-y-Baugh (now working), Bwlch-y-Dduaun, Pant-y-Mwyn, Pen-y-Fron, and Llyn-y-Fandy, all of which have produced very large quantities of lead ore; and at a short distance further northward are the Codd-llan, the Carrig-boeth, the well-known Coed-y-Hendre, and Rhosneigr Mines. In looking southward from the starting point, at a short distance we find the Fron, Criblyn, Mount Pleasant, Coed-y-Crylic, Jamaica, Lisbon, nearly all of which have paid large profits; and continuing the line still further south, and at a distance of about a mile and a half from Gwern-y-Mynydd is the Mass-y-sa Mine, which is now in full work, and has paid about £200,000 profit to the adventurers. With regard to the Gwern-y-Mynydd vein, it has been traced and worked upon continuously for a distance of nearly one mile and a half in length. Commencing at the western boundary of the common, from the River Alun, we find the following mines:—1. The Pen-y-Garrig Wen, and Dolol-Galch, worked about 70 years ago, by a company from Derbyshire.—2. The Cat-hole, which returned a large profit to a private company, and subsequently by the Mold Mines Company, producing from 300 to 500 tons of lead ore per month for a considerable period.—3. The South Mold, or West Gwern-y-Mynydd.—4. The Cefn-y-Gader.—And, 5. The Ladies' Venture, which respectively were productive mines.—6. The Winc Company, who raised upwards of 12,000 tons of lead ore, and made from £40,000 to £50,000 profit.—And lastly, the Shaft-llan East and Shaft-llan West Companies, who also raised several hundred tons of ore. It is difficult to estimate the entire produce of this last, as no accounts can be found except of a recent date; but judging from documents which have come under my notice, and verbal information, the foregoing range of mines upon this (the Gwern-y-Mynydd) vein must have yielded from time to time 40,000 if not 50,000 tons of lead ore. The Gwern-y-Mynydd Mine, Shaft-llan East and Shaft-llan West Companies, were at work vigorously during the years 1822 and 1823, and in 1824 they jointly set up a 51-in. cylinder engine, and subsequently the mines were consolidated into one concern, and the 170 yard level extended 70 or 80 yards east of the pressure, or "Tom and Jerry" shaft, in productive ground, leaving very strong ore under foot for a considerable distance, a great portion of the sets of timber being placed upon lumps of ore, which could not be taken away on account of the water. About this time the day level ran in, which, with other difficulties, caused all operations to be suspended. The mine lay idle for several years, when it was again set to work for the purpose of unwatering and working the eastern end, and an outlay was made of from £2000 to £3000, in sinking a new engine-shaft to the depth of about 130 yards, and other preparations; when, in consequence of deaths and failures among the shareholders, the mine was again brought to a standstill, and has remained so to this day. I have gone through this little history in order to show the opinion in which the old company held the mine, by making so large a preliminary outlay for further explorations, the whole of which was lost to them; but the greater portion of it is available if the mine be again put into operation. From reliable information, I find that a sump was sunk into the heading wall about 30 yards east of the pressure shaft, upon the 170 yards level, and a cross-cut put out north, large lumps of lead ore coming in, when the water began to rise, and the men were driven out. The fate of the mine becoming, apparently, inevitable, there was a general scramble, and several tons of lead ore were got out in a few hours from different places about the sump. The great run of ore which was the making of the Gwern-y-Mynydd Mine is upon the crop, the two walls of the vein becoming heading walls, and thus forming an immense hopper, in which was found the great body of ore, generally called by the miners "the fat." At the summit of the hill this became contracted and barren, and I am of opinion it is now setting in again, and have no doubt there will be found an exceedingly rich piece of ground to the east of the pressure shaft. I am strengthened in this opinion by my past experience at Fron Fawng, such having been precisely the case there. This run of ground will extend 500 to 600 yards in length before reaching the coal measure, and in all probability will prove the richest part of the vein hitherto discovered. The course I should recommend to be pursued is to erect an engine (not less than a 65-in. or 70-in. cylinder) upon the new shaft, to enlarge that shaft to the present bottom (34 yards below the day level), and to sink it until the vein is intersected, which will be about 30 yards below the 170 yard level. It is to be regretted this shaft was not placed further eastward; but as it is sunk, and the day level extended thereto, I think that, in order to save time and expense in arriving at a good trial, it will be prudent to adopt it as the first point of operation. I have carefully considered all the bearings relating to this project, and am firmly of opinion that, under judicious management, it will make a lasting and profitable concern; and this opinion is confirmed by several good authorities whom I have consulted upon the subject. With respect to the amount of capital that may be required, I should say, without going into details, that £10,000 would be quite sufficient.

ROBERT WILLIAMS.

THE PROGRESS OF MINING IN 1861.

BEING THE EIGHTEENTH ANNUAL REVIEW.

BY J. Y. WATSON, F.G.S., Author of the *Compendium of British Mining* (published in 1843), *Gleanings among Mines and Miners*, &c.

THE SEVENTEENTH ANNUAL REVIEW OF MINING PROGRESS appeared in the MINING JOURNAL of December 29, 1860, and January 5, 1861.

A FEW COPIES of the REVIEW of 1855, containing Statistics of the Metal Trade and the Dividends and Percentage Paid by British and Foreign Mining Companies, and the State and Prospects of upwards of 200 Mines. Also a FEW COPIES of the REVIEW OF 1852, 1853, and 1854, MAY BE HAD on application at Messrs. WATSON and CUELL'S Mining offices, 1, St. Michael's-lane, Cornhill, London.

Also, STATISTICS OF THE MINING INTEREST. By W. H. CUELL.

WATSON AND CUELL'S MINING CIRCULAR, published every Thursday morning, price 6d. or £1 1s. per annum, contains Special Reports of Mines, and the Latest Intelligence from the Mining Districts, from an exclusive resident agent; also, Special Recommendations and Advice upon all subjects connected with Mining, and interesting to Investors and Speculators. A Record of Daily Transactions in the Share Market, Metal Sales, and General Share Lists, &c. Edited by J. Y. WATSON, F.G.S., and published by WATSON and CUELL, 1, St. Michael's-lane, Cornhill, N.B. Messrs. WATSON and CUELL have made a selection of a few dividend and progressive mines, which they have reason to believe will pay good interest, with a probability, also, of a rise in value, the names and particulars of which will be furnished on application.

INVESTMENTS IN BRITISH MINES.—Mr. MURCHISON'S REVIEW OF BRITISH MINING for the QUARTER ENDING 30th MARCH, 1861, with Particulars of the Principal Dividend and Progressive Mines, Table of the Dividends Paid in the last Five Years, &c., is NOW READY.

Price One Shilling. At 117, Bishopsgate-street, Within, London, E.C.

Reliable information and advice will at any time be given on application.

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* * * Much inconvenience has arisen, in consequence of several of the numbers during the past year being out of print, we recommend that the Journal should be regularly filed on receipt: it then forms an accumulating useful work of reference.

CHERT-STONE.—I have a lease of a valuable chert-stone quarry, not far from a railway. I am aware it is used in the pottery for the purpose of grinding flint. Can any of your correspondents inform me whether or not it is used for cement, glass making, or any other purpose, and where a good market can be had for it? The supply is unlimited, and the quality first-class.—A SUBSCRIBER.

you, because forming an explosive compound with air at a temperature frequently existing in warm rooms; 4 more samples are reported safe, though not dangerous, because exploding at a slightly higher temperature not often existing in domestic rooms; 23 samples are reported safe for all ordinary purposes if used in the lamp in which paraffin oil is used; 3 of these samples are less safe than the other 20, but the reporter places them all beyond the limit of possible danger. The whole of the samples which could be recognised from their properties as YOUNG's paraffin oil are quite safe; 2 samples of American oil were also quite safe; 3 others were less safe, but well within the limits of danger; and 9 samples of American oil were reported as unsafe or dangerous in ordinary hands. An appendix to the report gives the names and addresses of the parties from whom the oil was purchased. As the facts with reference to the danger of American oils have been now so frequently stated, and the reports have so clearly point out their explosive character, it is to be hoped that oil-sellers will clearly see that it is to their own advantage to keep only safe oils, and that any temptation with regard to price will not induce them to sacrifice the lives of their unsuspecting customers. We are of opinion that in case of any future deaths from explosions of dangerous oils, as the qualities of the American oils are now so well known, the jury will not be at all likely to excuse persons who sell such oils on the plea of ignorance, and that verdicts entailing very serious consequences upon the vendors of dangerous oils may be expected in future cases.

THE ELSECAR COLLIERY—PERFORMANCE OF A VENTILATING FAN.

J. J. Atkinson—one of the highest authorities in purely scientific engineering to be found in the North of England—accompanied by Mr. Atkinson, of Manchester, and one or two others, recently paid a visit to Hemingfield Pits of the Elsecar Colliery, to witness the performance of the ventilating fan. At the request of the President of the North of England Institute of Mining Engineers (Mr. N. J. Atkinson), Mr. Atkinson has embodied the result of his observations in a paper which the other week was issued as a portion of the Transactions of the Institute. There being only two ventilating fans in operation in the Northern coal field—at Tursdale and Montague Main Collieries—this is of considerable interest to northern engineers, and a summary paper may be useful to our readers generally. At the Hemingfield pit notice, there are two downcast shafts, each 468 feet in depth, 300 yards to the rise are two upcast shafts, which near the centre, are brought into one, and open into the central part of one side of the fan. Workings ventilated by this instrument extend about 726 yards in one, and 770 yards in the other, on the level course of the strata, and about 136 acres. The dimensions of the fan, into which the air is admitted on one side, are as follows:—Diameter outside the extremities of the vanes, 22 ft. 8 in.; width of the outside rim, 22 ft.; diameter inside the rim, 16 ft. 10 in.; width of the rim, 1 ft.; depth of ditto, 3 ft. The vanes, which are straight, form an angle of 43°, and are drawn to them from the centre of the fan, which angle is considered to be the best. The vanes are 26 in number, and it has seven arms, on which the rim is attached. The fan is driven by a steam-engine, having a vertical cylinder 21 in. in diameter, and the length of stroke is also 21 in. A connecting-rod is attached to a crank at the extremity of the main shaft of the fan, so that the fan makes two strokes for each double stroke of the engine. Three cylindrical boilers, with horizontal ends and wheel-flues supply the steam, but two of them are ordinarily sufficient for the purpose. During the experiments the pressure of steam was 43 lbs. per square inch, but 40 lbs. per square inch is the ordinary working pressure. The average rate of air circulated in the mine under the ordinary working of the fan was stated to be 600 cubic feet per minute, with a water-gauge of 0'5 to 0'6 in. at the fan, which includes the shaft resistances. The average number of strokes of the engine in the ordinary working of the fan was stated to be 60 per minute, and the coal consumed 10½ lbs. per minute. The cost of the fan and engine, exclusive of the boilers, on-work, and the expense of erection, was stated to be £450. Three experiments were made with the fan on the occasion of Mr. Atkinson's visit. The first showed that ventilation when the fan was not working, the number of cubic feet of air per minute being 14,173. The second experiment was made immediately the pit stopped working, when the fan made 60 revolutions per minute, the water-gauge stood at 8 in., and the number of cubic feet of air per minute was 82,294. In the third experiment, the fan made 82,236 revolutions, the water-gauge was 7 in., and the cubic feet per minute 75,718. Discarding the natural pressure (which would operate equally well in a furnace or any other ventilating power), the real power given out by the fan, utilised in the production of ventilation, according to Mr. Atkinson, is by the first experiment 8'23, and by the second experiment 10'374-horse power. Assuming the time of making the second experiment the boiler fires were consuming the ordinary working quantity of 666½ lbs. per hour, there was a consumption of 53'48 lbs. per hour utilised per hour. Mr. Atkinson here enters into elaborate calculations, to ascertain the amount of heat required in the upcast shaft of a furnace-ventilated mine, to obtain the effect obtained by the Elsecar fan. The utilised consumption of coal in the first experiment is put down, as we have stated, at 58'48 lbs. per horse-power per hour. In five collieries in the North of England the average obtained by experiments is 50 lbs., but the disparity between the highest and lowest figures is great, one colliery being consumed 162'4 lbs., and another only 27'2 lbs.—so much depending upon the sizes and shafts and air-ways, the dryness of the walls and brattices of the shafts, and so on. A furnace at Hemingfield Pits would have laboured under very difficult circumstances, owing to the upcast shaft being no more than 60 fathoms deep, and, under the circumstances, in order to get the same amount of air as was obtained by the fan in No. 3 experiment, an average upcast temperature of 152'8° would be required. And, admitting that so much of each cwt. of coal spoiled by the heat of the

the short one more than its share. Supposing one split gets 60 per cent, and the other 40 per cent, of the total to begin with, if the air-ways are level each will get the same percentage when the gross amount is lessened. Just the reverse results take place if you take the proportions from any standard amount of ventilation, and then increase the gross quantity, where there are rise and dip splits, supposing the air in the returns to be hotter and less dense than in the intakes in each case. If, however, the returns were so mixed with carbonic acid gas, and so cool as to be more dense than the air in the intakes, then the reverse results would ensue on increasing or reducing the ventila-
ting pressure where the splits are not level. There had been a long discussion on the subject at the Northern Institute. Some one there suggested, after the Lund Hill soci-
ety, that instead of having air kept so much in one current, if they had taken up in each bank in separate splits they would have got much better ventilation. Some one else said 'Yes; but in the event of the furnaces being low, and the general ventilation being reduced, the far-off places would get no air; it would all run through the short cuts,' and it was to correct that idea that the matter was made the subject of investiga-
tion, by careful experiments. The benefit of splitting air depends in a great measure upon the proportion of resistance that occurs in the shafts as compared with that which occurs in the workings. Generally speaking, you can subdivide the workings till you reduce the friction very materially; but the friction in the shaft is, of course, always the same for a given quantity of air, and it is only from reducing the friction in the work-
ings that the beneficial results of splitting the air are derived."

In reply to Mr. A. KNOWLES's enquiry as to whether Mr. ATKINSON considered dumb drifts to be requisite, he stated that—

"In some collieries where discharges of gas occurred, it might be expedient to use dumb drifts; but he would rather have sweeping ventilation, as a rule, and a mixing of the return air from the place where the gas was given off with that from the other ways, so as to render it safe before reaching the furnace. If you supply the furnace with fresh air, you can never get with the same furnace the same amount of air into the workings, and our object is to cut down the amount of friction in the downcast and upcast shafts. There is one rare case where that does not hold, and that is if your returns were so charged with carbonic gas, so fearfully charged with it, that they would not let the furnace burn, you would have nothing else for it but to use fresh air, but you would use it at the expense of not getting the same amount of ventilation as you would get with ordinary air."

The important nature and general interest of the papers read before the Manchester Geological Society has induced the council to allow their "Transactions" to be sold to non-members, at 6d. each number.

“THE STUDENT’S MANUAL OF GEOLOGY.”

THE STUDENT'S MANUAL OF GEOLOGY.

The importance of the science of geology to the practical miner is almost inestimable, but, unfortunately, it is a science of which it is extremely difficult for this class to acquire a really satisfactory knowledge—partly, no doubt, because to be enabled successfully to study geology it is necessary to have no mean acquaintance with several other sciences, but more particularly owing to many empirics having attempted to expound the science, and led their followers into errors which could but induce the opinion that the science itself was useless, and that the followers of it simply wasted their time. With the exception of the Text Books of Mr. Page, there has been scarcely a work within the reach of the student upon which reliance could be placed, the majority of other authors either endeavouring to propagate the most extravagant and untenable theories, or treating only of some portion of the subject in minute detail in large and costly books. We have now before us the second edition of the very excellent Manual of Geology,* by Mr. Jukes, the Local Director of the Geological Survey in Ireland, and unhesitatingly commend it to the attention of our readers. The entire arrangement is beautifully systematic, and well calculated to lead the student by an easy path to a very complete knowledge of the science of geology, giving him sufficient information upon the sciences of chemistry, mineralogy, zoology, botany, &c., to enable him thoroughly to understand his subject, and that too without overburdening the memory with useless technicalities.

That Mr. Jukes's Manual is perfect we will not attempt to prove; but the imperfections are not of a character to impede the progress of the student, even if the work were not written with the view to teach the student to think rather than to rely upon the thoughts of others. Mr. Jukes has availed himself of the labours of those who have preceded him, and appears to have carefully avoided all doubtful and useless works. Dr. Sullivan has assisted him in the chemical and mineralogical portion; Prof. Huxley (who could have wished it had been Prof. Owen instead) in the classification of the animal kingdom; and Mr. W. H. Bally, of Dublin, in the illustrations of the characteristic fossils. When the fossils are not figured he has appended references to figures in other works, choosing where he could the most popular books, such as Lyell's and Phillips's Manuals, and the *Tabular View of Characteristic British Fossils*, published by the Christian Knowledge Society; but where no figures exist in such works he has referred to more recondite sources, such as the publications of the Palaeontographical Society, Sowerby's *Mineral Conchology*, Murchison's *Siluria*, and others. Morris's *Catalogue of British Fossils* has necessarily been his chief guide in selecting these references with respect to all post-silurian fossils, the catalogue of Morris and Saiter, in the last edition of "Siluria," taking its place for those of the previous periods. The three great divisions into which the work is divided are Geognosy, Palaeontology, and the History of the Formation of the Crust of the Earth—Geognosy being, again, divided into Lithology and Petrology. The section Lithology contains eight chapters, treating respectively of chemistry and mineralogy; rock-forming minerals; origin, classification, and determination of rocks; igneous rocks; aqueous rocks mechanically formed; aqueous rocks chemically and organically formed; aerial rocks, and metamorphic rocks. Under Petrology the author describes the formation of rock-beds, joints, formation of rock blocks, movements of disturbance in the earth's crust, inclination of beds, faults or dislocations, cleavage and foliation, denudation, unconformability and overlap, the granite or hypogenous rocks, trappaceous rocks, volcanic rocks, orography (or the structure and origin of mountains), mineral veins, and the art of mining. The Palaeontological portion of the work comprises three chapters, one on zoology and botany, and two on the laws and generalisations of Palaeontology. In the History of the Formation of the Crust of the Earth the various deposits, commencing with the most ancient, are in turn treated of, each chapter being devoted to each, and the history is concluded with an interesting account of the geological changes at present going on. A chapter on geological surveying brings the book to a close, an elaborate index rendering the whole of the facts given available for instant reference. In future Journals we shall take the opportunity of alluding to some of the more important of the many interesting details given in the volume.

THE ELY VALLEY AND THE GILVACH COAL COMPANY.—The opening by day level was commenced at Gilvach on the 1st of this month, under the direction of the company's engineer (Mr. Arthur O. Davies), and within a week the coal has been won. The seam is of first-class quality for house and gas purposes, and of unusual hardness; the thickness 4 ft. 4 in., and the roof of indefeatable pennant rock.

IN THE GASES IN USE

the foot of the Himalayas (not, of course, in an unbroken bed), and that the outcrop may be traced all along the foot of the lower hills, either in actual coal outcropping or the accompanying beds of shale, or iron beds; and I also believe that the beds when come upon will be of enormous thickness. I cannot undertake to state the depth at which the beds may be found, but they will be nearest the surface just at the foot of the mountain, where there is what is termed a great 'fault' or tilting up of the rocks. I arrive at this opinion from my intimate knowledge of the coal fields of both England and the Continent, and also from what I have seen of the magnificent, but undeveloped, coal fields of Southern Africa, which I went out to investigate in 1853. The coal fields of India, &c., are not, however, exactly like those of England, or the brown coal of Australia; any more than the oaks of this country are precisely like the oaks of the Himalaya. It is a great satisfaction to find my opinions have at length been confirmed by accidental discovery, but they might have been confirmed long ago by actual experiment, that

"An Old Geologist," in reply, says—"I repeat, that if this tertiary coal of Subathu could be obtained in sufficient quantities, it would be of great value to the Government who would have sanctioned the expenses necessary."

"I should turn out to be as good even as the Austrian tertiary coal, with which the steamers in the Adriatic are worked, we should owe our chief obligation to its discoverer, Colonel Fyers, of the Rifle Brigade. Again, to whatever extent your correspondent may be acquainted with the old carboniferous deposits of Britain, and the much younger carbaceous beds in India, he is manifestly unacquainted with the tertiary Austrian coal to which I alluded, or he would not have confounded it with the slightly older brown coal of Northern Germany. In fact the tertiary coal of the Subathu and Maritime Alps is black, compact, and lustreous, though it is, as I stated, very inferior in calorific value to the old coal of Europe. Judging from the descriptions of the geologist cited in my former letter, I apprehend that the Sub-Himalayan coal is of about the same time and age as that of the Austrian and Italian Alps. There is still another deposit of tertiary coal in Sennar, which is the thinnest of the several, and only a few feet thick."

point in the letter of Mr. Sowerby to which, in the absence of the eminent geologist (Prof. Oldham) who superintended the geological survey of India, and of his assistant (Mr. Medlicott), I must advert. Mr. Sowerby states that, in a conversation with those two gentlemen, they 'so thoroughly pooh-poohed the idea of coal being found in the Sub-Himalayas,' that 'he did not think it worth wasting his time in entering upon a discussion of the subject with them.' Now, from my acquaintance with Prof. Oldham and Mr. Medlicott, I venture to suggest, as highly probable, that when they are able to speak for themselves they will say that what they 'pooh-poohed' was the supposed existence in that region of anything like the old and valuable European and North American coal of palaeozoic age, none of which has as yet been discovered within our Indian empire. Those practical geologists well knew long ago, indeed, of the existence of those thin courses of lignite coal in the Sub-Himalayas to which I adverted in my former letter, and one of them (Mr. Medlicott) has, I happen to know, complimented Colonel Evers on his having discovered, in deposits of that age, a bed of the great thickness and

Fyers on his having discovered, in deposits of that age, a bed of the great thickness and good quality which characterises the coal of Subhatoo."

Mr. Sowerby rejoins:—"The assumption of my not being acquainted with the coal-fields of Southern Austria is gratuitous, as I do happen to have been over them twice, and the beds of the sub-Himalaya may be something similar, but are not exactly like them. Some of the ironstone most closely resembled what I saw in Bohemia. In 1851 Mr. W. J. Henwood, F.R.S., visited the locality, and pronounced the iron beds 'as no doubt the trouble of looking at,' and the Government had adopted this opinion until I proved the contrary, and there are now several blast furnaces at work with charcoal. If eminent geologists, like Sir Roderick Murchison, get such great glory for foretelling the discovery of gold in Australia, a humble engineer like myself may claim a little credit for pointing out the probability of finding coal in Upper India. As such as the forests of India have all been destroyed or used up the Government will probably be compelled to search *after coal* in earnest. What J. W. Sowerby has done is

REPORT ON CORNWALL AND DEVONSHIRE

[FROM OUR CORRESPONDENT IN TRURO.]

MAY 8.—At the meeting of the SOUTH FRANCES adventurers, on Monday, very sanguine expectations were expressed respecting the speedy conclusion of the protracted litigation between that mine and WEST BASSET. It is to be hoped that these anticipations may be realised; for in the interests of all parties any conclusion is better than an indefinite prolongation of the present wasteful and irritating law proceedings. At the same time, an impartial looker-on cannot avoid being struck with the fact that both sides express the same amount of confidence. If you suggest to either party that, even at present, the affair is still monstrously complicated, you are at once assured that you are quite mistaken—that there is no difficulty at all in *their view of the case*, which is so plain that no man of common sense could be in doubt for a moment, if the matter had not been obscured (purposely obscured) by the subtleties of the opposite party. Between these conflicting assurances—assurances made by gentlemen of high character and position—what is anyone to believe? For my part, I am inclined to think that there are even yet considerable difficulties in the matter; and that it is far from impossible that the matter may be prolonged for some years more, if the same spirit of determined and uncompromising litigation is persevered in. The respective versions of South Frances and West Basset have more than once appeared in the Journal; but still the following particulars, being necessary to illustrate the new phase which the matter has taken, may not be without interest.

the new phase which the matter has taken, may not be without interest. All the questions in dispute turn upon the interpretation of the description of certain boundaries given in a sett of March 24, 1835, called the Wheal Haste sett. The West Bassett lease now running being only a renewal of this sett, and the present South Frances lease being of subsequent date, it has been admitted on both sides that this Wheal Haste sett is to govern the matter. The words in which the boundary is described in it are as follows:—

"To be bounded on the north and west by the estate of Bosleake, the property of E. W. W. Pendarves, Esq., and the estate of Treskillard, the property of Lord Grenville. On the south by a straight line of about 335 fms. from John Vincent's house, at the south-west extremity of the set^t to a bound-stone at the north-west extremity of South Wheal Bassett set^t, and from thence eastward by the north side of the road leading to Carnkie, to a bound-stone fixed at the south-west corner of North Wheal Bassett set^t, and from thence due north by the magnet about 170 fms., to a bound-stone fixed at the south-east corner of Bosleake estate, and which premises are particularly delineated by the boundaries or a break of this set^t."

In this description it will be remarked that the straight line of about 335 fms. is to be drawn from John Vincent's house, but from what part of the house is not stated. Turning to the map on the back of the sett, the line is found to be drawn from the *north* corner of the house, thus giving the width of the house to South Frances. This would seem at once to decide this part of the question in favour of that mine, but for several remarkable discrepancies. In the first place, John Vincent's house (which by-the-bye never did belong to a John Vincent) is placed altogether wrong on the map. There is no house where the house is shown, the real house being 50 fathoms further east. In the next place, on several other maps the line is shown drawn from different parts of the house; on those on the counterpart of Wheal Haste sett, and on South Frances sett, the line is drawn from the middle of the house, and in others it is said to be drawn from the south corner. These, of course, are not evidence as against the map on the sett itself, but they are relied upon by West Basset party as showing the line should be drawn irrespective of the position of the house, which being so outrageously incorrectly placed in the map, cannot properly be maintained as a mark. They maintain that the line should be taken *absolutely* as shown on the map, leaving out of the question Vincent's house which is so incorrectly placed. Such a line would give them so many fathoms south of the road, and would include all the ground they claim. They insist that it was intended to give them this extent of ground, and that the north of Vincent's house, as shown in the plan, was merely fixed upon because it was supposed to give them this ground. The facts so far favour this theory, that if Vincent's house were *actually* placed in the imaginary position it is shown to occupy in the map, a line from the *north* corner would give West Basset the same extent of ground as a line drawn from the *south* corner of the house as it really stands—that is, all the ground they claim.

they claim. It is evident, whatever anyone may say to the contrary, that such a confused state of things is capable of giving rise to almost endless litigation. As almost everyone knows, the matter has now been litigated since 1857 when the action of trespass of Reynolds *v.* Buckley was commenced, in the Queen's Bench, by the South Frances adventurers. In reply to this action, the West Basset adventurers paid 100/- into Court, acknowledging a certain amount of trespass even beyond the bounds they claimed. The cause was tried at Bodmin, on March 20, 1858, and resulted in a verdict for the plaintiff (South Frances). It may be contended that the matter should have rested here; but the West Basset people state that this verdict was obtained under peculiar circumstances. In the first place, they were advised by their leading counsel, Mr. Lush, that the matter was really one of *law*, and not of *fact*; and that consequently the verdict of a jury, one way or other, was immaterial. Hence the defendants at this trial offered no evidence, contenting themselves with cross-examining the plaintiff's witnesses. No damages were named, it being agreed that they should

Here we have the South Frances party triumphant at a trial at *nisi prius*, and there I shall leave Reynolds *v.* Buckley for the moment. The West Bassett party (according to their version) being considerably enlightened by the evidence that came out at this trial, began rather to doubt whether or not the matter was so completely one of law as they had been advised. At any rate, whether it was or not, they state that, being convinced the facts were as much in their favour as the law, they determined to alter their policy of not giving evidence, and boldly to grapple with South Frances on the merits of the case before a jury. With this intention they commenced the cross-action of trespass, also in the Court of Queen's Bench, known as Lyle *v.* Richards. In this, South Frances admitted a certain trespass, and paid 525*l.* into Court. This cause was tried at Bodmin, on Aug. 3, 1858, and resulted in a verdict for the plaintiff—that is, in favour of West Bassett. In this cause, also, it was agreed that the damages should be afterwards assessed, and that leave should be given to move to set aside the verdict. Thus we have, at *Nisi prius*, two verdicts directly opposite; the first in favour of South Frances, and the second in favour of West Bassett. Each party naturally considers its own verdict the best, and the one that will ultimately prevail. The West Bassett party, however, insist that, so far as the merits of the case go, their verdict is evidently the best. The first trial, they say, was a mere walk-over by the opposite party, they having offered no evidence; whereas the second trial, each party having had the experience of the first, was a fairly-fought battle, in which West Bassett gained a complete victory on the merits of the case after it had been thoroughly sifted. Time, however, can alone show which is really the better of the two verdicts.

is really the better of the two verdicts.

Each party having secured the verdict of a jury, the battle commenced before the judges. *Reynolds v. Buckley* being the first cause, was naturally the first to be fought out. The West Basset party moved the Court to set aside the verdict of the jury, and to enter one for the defendants, on the ground that the question to be decided was one of law, and not of fact—and that, at law, the line drawn on the Wheal Haste plan should be taken *absolutely* with reference to its general position, and not with reference to the corner of Vincent's house, which really did not exist as shown in the map, and which must, therefore, be ignored in fixing the line. This I believe, was the main point insisted on, but there were numerous others; indeed, the number of collateral questions raised in this case are so numerous that the professional men themselves find it no easy matter to steer through them. On this point the Court of Queen's Bench decided against West Basset; they held that it was not a question of law, but a question of fact, to be decided by the jury, with whose verdict, consequently, they declined to interfere. This view was afterwards confirmed by a Court of Error, and in the case of *Reynolds v. Buckley* the verdict now irrevocably stands for the plaintiff—South Frances. The West Basset party, however, deny that any very substantial victory is thus gained by their opponents; they insist that this cause is merely lost to them by their bad policy in being too confident that the question was one of law, and not of fact, and, consequently, not fighting it on its merits at the first trial. Having allowed this trial to go against them without a struggle—without offering evidence—before they found their error it was too late to disturb the verdict, except by setting it aside on the ground that the question was one of law. The Court deciding otherwise, and holding that it was one of fact, by no means decides that the facts are against us (says West Basset): that is a question that does not enter into their province; it is one to be decided by a jury, and a jury having decided against us, although it was a *de morte* case, and we not having taken any steps to get a new trial within

to disturb the verdict, however contrary to the facts it may be, and as we (West Basset) contend it is proved to be by the result of the last trial, which was fairly fought out.

Whatever the ultimate value of this verdict in *Reynolds v. Buckley* may be in a question that must be left to the future to decide. Whether the verdict in *Lyle v. Richards* will compel the South Frances people to return anything they may receive under the verdict in *Reynolds v. Buckley*, and a good deal more to boot, as the West Basset people assert will be the case, is no easy matter to guess. But, although South Frances have now got a verdict, no longer disputed, I am sorry to say that the cause of even *Reynolds v. Buckley* by no means ends here. Another question, as difficult as the original one about Vincent's house, has been raised as to the boundary point at the other end of the line. Referring back to the wording of the sett, it will be seen that the line from John Vincent's house (wherever that may be) is to be drawn "to a bound-stone at the north-west extremity of South Basset sett;" and in the order of the Court made to assess the damages the disputed ground is thus described:—

"It is ordered that the amount of the damages to be paid to the plaintiff in respect of a trespass between a line drawn from the south corner of John Vincent's house to the bound-stones mentioned in sett No. 1, being the Wheal Haste sett of March 24, 1835, at the north-west extremity of South Wheal Basset sett, and a line drawn from the north-east corner of the said house to the said bound-stone, be ascertained by a mining captain."

Now, where is this bound-stone? I am sorry to say the point is violently disputed. The original sett said that the line was to be drawn from Vincent's house on the west to a bound-stone on the east; and after five years' law the Court of Queen's Bench has decided, in one cause at least, that the western point is Vincent's house, as it now stands, and the north corner of that house. But how about the bound-stone? It is admitted by all parties that this bound-stone is on the corner of a road leading to Carnkie; but on which corner of the road, the north or the south? On the north corner say the South Frances party; on the south corner say West Basset. As this point is likely to re-open the whole question, even in the cause of *Reynolds v. Buckley*, I shall just briefly refer to the position each party seeks to maintain.

According to the map on the back of the Wheal Haste sett, and which is referred to as particularly delineating the premises demised, the line is, undoubtedly, drawn to a point at the south corner of the road; and to this point West Basset party insists it should be drawn. But, say South Frances, there is no bound-stone at the crown of the road; the bound-stone is on the north corner, and in drawing it to the south corner there has been a mistake made in the map; and in proof of this, in our (South Frances) sett the line is drawn to the proper bound-stone at the north corner of the road. To this West Basset replies, we have nothing to do with your (South Frances) sett, which was granted subsequently to ours; and as the map on Wheal Haste sett has been made to tell against us in fixing the point of Vincent's house to which the line is to be drawn on the west, it must be allowed to tell in our favour in fixing the points to which the line is to be drawn on the east. Besides, they assert there was formerly a bound-stone at this point, which may have been removed for a time; for while all the other bound-stones referred to in the description are stated to be "fixed," no such word is added to this one, which was probably intended to replace in its original position at a future time. Against this South Frances have some very strong arguments; for they maintain that a stone at the south corner of the road could not be at the north-west extremity of South Wheal Basset sett, inasmuch as the road is admitted to be in that sett; and also that the line is described as continuing from the bound-stone "thence eastward by the north side of the road," which would be impossible if the bound-stone were at the south side of the road, without crossing the road in the first place, of which nothing is said. However this may be, the question is disputed, and the West Basset people have recently erected a post at the south corner of the road, which is popularly known in the county as "Mr. Finch's post." To this post they (West Basset) assert that the assessor, Capt. Charles Thomas, is bound, by the order of the Court, to draw the line from the south corner of John Vincent's house, in ascertaining the damages under the action of *Reynolds v. Buckley*. They strongly contend that under the order he has no option but to adopt the line as shown on the map at the back of Wheal Haste sett, that is to the south crown of the road; and that if he adopts any other his award will be set aside by the Court. They also say that if the question comes before the Court, which has already decided that questions of the kind are matters of fact, and not of law, it will probably be referred to a jury again, so that even the first tried cause of *Reynolds v. Buckley* may yet, after five years' existence, have to begin *de novo*. They also maintain that if Capt. Charles Thomas assesses the damages on what they conceive to be the right line—that is the line to the south of the lode—the damages will be less than the amount they paid into Court (100%), and that, consequently, they will be entitled to costs against South Frances even in the action gained by the latter. As Capt. Charles Thomas has probably by this time made his report to the Court, I suppose the next step will be to raise this bound-stone question.

With respect to the cause of *Lyle v. Richards*, the defendants (South Frances) have obtained a rule for a new trial, subject to the opinion of the Court that the question to be decided is one of fact, and not of law. This has not yet been decided; but as in the other cause it has been decided that the question is one of fact, there can be little doubt that the same conclusion will be arrived at in this cause. If so, the whole matter will be again brought before a jury, and the verdict they arrive at will probably really decide the entire question. As to what this verdict may be expected to be, both parties are equally confident; West Basset, particularly, believe they are certain of success, inasmuch as they have already had a verdict in the only trial fairly fought out (as they allege) on both sides. Thus, after five years' litigation, what is decided? Nothing, so far as I can see, except that the question to be decided is one of fact, and not of law. At a cost probably not much under 5000*l.*, the Court of Queen's Bench and the Court of Error have decided that the matters in dispute are to be decided not by them, but by a jury. This is an important decision, no doubt, but does not seem materially to advance the final conclusion.

In the meantime the leases of both mines are coming to an end. South Frances lease, particularly, expires in 1864; and the South Frances people allege that the object of West Basset is to continue the litigation, right or wrong, until their opponents' lease expires. I can scarcely believe this, for it would be an unworthy mode of warfare; but it cannot be denied that the running out of the South Frances lease will bring about a curious state of things. It will not affect the past trespass; but as to the ore in dispute now standing—worth some 10,000*l.* or more—it would seem to fall to the party whose lease runs the longest, unless the lords interfere, and claim the ground as against West Basset. Of course South Frances lease will be renewed; but in dealing with the disputed ground the lords must act very carefully if they are to avoid mixing themselves up in the litigation. Sir R. R. Vyvyan particularly, to whom a moiety of the minerals belongs, and who is not, in any respect, responsible for the confusion and ambiguity of the past grants will no doubt, be very careful to avoid being in any way, even morally, embroiled in such a miserable dispute. Of course, it may be possible to renew to South Frances the grant of even the disputed ground, by simply granting them whatever has not already been granted to West Basset, but still a crop of legal difficulties might be got out of this if the litigation continues to be pursued in the same spirit.

The most remarkable point, however, connected with the affair is that this desperate and wasteful litigation is directed and conducted, on both sides, by men of the highest position and character. It would be difficult to find in England a body of gentlemen in whom one would be more inclined to place unlimited confidence than those composing the South Frances and West Basset committees; and the solicitors on both sides are firms of the highest standing. If the committee had been composed of inexperienced people, or the professional men had been of the needy or greedy class, one would scarcely be surprised; but that committee comprising on either side such men as Mr. John Rule and Mr. W. A. Thomas, and firms such as Messrs. Smith and Roberts, and Messrs. Minet and Smith, should be the parties concerned in such a matter is really surprising. That the grants, with their incorrect maps, are obscure and confusing cannot be really doubted, although I am aware that such a proposition will be at once denied by both parties; but the matter is one that should have been compromised, or referred to arbitration. Mr. Marriott, the late agent of the Basset property, did propose a line—called Marriott's line—which would have divided the ground in dispute. It is lamentable to think that this reasonable compromise was not accepted; but with whom the responsibility of its rejection lies it is not easy to say. Like many other facts connected with this dispute, conflicting statements are made on either side as to which rejected this compromise.

It has often been remarked that the more obscure a dispute the more bitter it is likely to become; and this is certainly shown in this case. Indeed, with almost every one concerned—even with the professional men

and their representatives—it has become almost a personal matter. The pride and *amour propre* of both sides is thoroughly roused, and defeat would be felt more as a personal humiliation than as a business loss. Even the lawyers have forgotten the prudent maxim which cautions men against too much zeal. They have entered into the matter as if their very honour depended upon success. Under such circumstances, conciliation or compromise becomes almost impossible, and there seems nothing for it but to fight out the matter to the very last. Still this is very lamentable, for, whatever either party may say to the contrary, it may well last until all the substance in dispute is wasted. The very position and high character of the committees on either side precludes any interference on the part of the shareholders. At the same time, this continual law must be wearying to everyone; indeed, I believe it is, and I am inclined to think that if either party could see their way out of it without humiliation—without the bitterness of having to admit themselves beaten—they would gladly be done with it. The lawyers, I believe, are as sick of it as the shareholders; can there not, therefore, something be done by which the battle may be drawn—by which both sides may retire with the honours of war. It may be too late now to accept Marriott's line, for it would be difficult to settle the question of costs; but could not the whole matter be referred, with honour to all parties, to two or three gentlemen of high standing in mining, wholly independent of either side—such men, say, as Messrs. John or Richard Taylor, Mr. John Petherick, Mr. Thomas Sopwith, or many others? Both parties have, or profess to have, unlimited confidence in the justice of their cause; and none can doubt that such gentlemen as I have named would do justice. At any rate, their position is such that no one could feel humiliated by deferring to their decision.

REPORT FROM NORTHUMBERLAND AND DURHAM.

MAY 8.—The Coal and Iron Trades, although dull, are somewhat steadier than they have been of late. The exports of coal from the Tyne last week show a considerable increase over the previous week, the total amount being 43,815 tons; of iron, 14,707 cwts., against 18,156 cwts. in the previous week, being a decrease of 3449 cwts. There was a considerable increase last week in the iron exports from Middlesbrough, the quantity of pig and manufactured iron being about 3000 tons. The number of furnaces in blast in this district on May 1 was 54, and 25 out. Out of 18 furnaces belonging to the Derwent Iron Company, at Consett, 14 were out of blast. Messrs. Gilkes, Wilson, and Co., of Middlesbrough, are about completing a contract they have had on hand for the last nine months for malleable iron girders for railway bridges between Cokermouth and Workington. Some of these girders are very large, being in some instances 80 ft. long and 8 ft. deep, with flanges top and bottom, and made of plate $\frac{1}{2}$ in. thick. It is said that this firm is likely to obtain an order for a number of such like girders, but of greater dimensions, for a line west of Bishop Auckland. Messrs. Hopkins and Co. have received an order for 5000 tons of rails from the North-Eastern Railway Company. These rails are to be manufactured out of hammered piles, a process that continental railway companies adopted some time ago. It makes the heads of the rails much harder, and consequently to wear much longer than the old or present rails.

A miners' delegate meeting was held in Newcastle, on Saturday, the Rev. Mr. Rutherford presiding. Mr. Towers, of the National Association, Mr. A. McDonald, secretary to the Scottish miners, and other gentlemen, were also present. The Chairman said that although there was not a large meeting, he took it that it was not because the public were not interested in the object for which the meeting was held, but it must be that they felt perfectly assured that the great calamity that befel so many men at Hartley must produce its legislative effect. He felt satisfied that the miners had only to be true to themselves to secure such protection. He read a letter from Mr. James Mather, South Shields, who was prevented by illness from being present. The letter contained a great deal of advice on the subject of two shafts. He said that two shafts close together may afford security from the blowing down of the lower part of the shaft brattice. In an explosion, however, such an arrangement will not obviate the chief deadly consequences of poisoned air-currents through stoppings blown down and crossings blown out, occurring more or less in every explosion. Place the two shafts at a distance from each other, or at the rise and dip of the mine; safety will thus be found, in the event of an explosion, in an increased current of fresh air rushing from shaft to shaft, and not turning short back.

Mr. W. Greaves moved, "That this meeting pledges itself to use every means in its power to gain a more comprehensive measure of inspection of mines, and that they will not rest satisfied until full protection is guaranteed by legislative enactment for the safety of the miners in following their hazardous occupation." Mr. McDonald seconded the resolution in a long and practical speech. Mr. Towers said he was authorised by Sir Fitzroy Kelly, and other Members of Parliament, to say that they would be happy to meet any deputation that the miners might send up to them, and to present the petition to the House of Commons, and give it the support that would ensure it a respectful consideration. He was instructed by the council of the association he represented for a time to take up his residence amongst them to endeavour to point out the course that appeared to the council the best that could, under the circumstances, be adopted for the miner to raise himself, morally and socially, into the position which he most unquestionably ought to occupy. Mr. W. Newton, surgeon, also addressed the meeting in support of the motion. The motion was agreed to unanimously.

At Cambolis the North Seaton Coal Company have broken the ground for a new colliery, &c., to the stone head. The workmen at the Meadow Pit, Ravensworth, are on strike, in consequence of some alterations in the mode of working the coal. The men have been accustomed to curve the bottom of the coal out, and then blast the upper part. The masters wish the men to curve the coal at the top, and blast the remainder. The coal is bad to curve at the top, on account of a band of jstone running through the seam, and it requires more powder to blast the coal by this method. The masters have set all the stones, &c., on to get coal.

The general meeting of the members of the Northern Institute of Mining Engineers will be held at Nevile Hall, Newcastle, on Thursday. The papers of Messrs. Dunn, Boyd, Gibson, and Wood, on "The Coal Fields of Cumberland," on "Part of the Northumberland Limestone Series," on "The Coal Formation of Cumbria," and on "The Upper and Lower Coal Beds of Northumberland and Durham," will be discussed.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

MAY 8.—The Iron Trade continues in about the same state as last reported; it is very far from being active, all orders are worked up closely, and only a few works are able to keep on at full time. The Coal Trade is necessarily duller as the weather gets warmer, as at the present time, when the demand for the ironworks is greatly restricted, the domestic supply forms an important element. The Hardware Trades are, on the whole, rather quiet, but the manufacturers are fairly employed, as a general rule. There are more persons in receipt of parochial relief, but considering the adverse circumstances of the time, and the long-continued dullness of the iron trade—since the end of 1857—there is less positive distress than might have been anticipated.

The MILLFIELDS BOILER EXPLOSION continues to attract attention, and to form the subject of discussion. The remarks made by Mr. C. L. Fletcher, chief engineer of the Manchester Steam-Boiler Association, given in the *Mining Journal* of last week, are well deserving of consideration—that "from the fact of the flame operating on the bottom of a water space, the circulation of the water was necessarily incomplete, and thus the risk increased of the rapid generation of the steam driving the water away from the plates." Several persons who examined parts of the boiler which exploded at Millfields were decidedly of opinion that they had been red-hot, yet there was strong evidence to show that the boiler was at the time well supplied with water. Mr. Fletcher's suggestion may reconcile these apparently opposite facts. In the *Wolverhampton Chronicle* of Wednesday, there is a letter, signed Arthur Dunn, and dated from Dalton-Terrace, London, giving expression to views which are at any rate plausible. Mr. Dunn heads his letter "Temperature, not Steam Pressure, the Cause of Boiler Explosions." His doctrine is, in the main, that it is an established fact that the temperature of the boiler and its contents—steam and water—may, under certain conditions, go on increasing without any corresponding increase of steam pressure being developed. In this state of things a reserve of latent heat is accumulated within the boiler. This heat, in the ordinary course of things, would expand itself in converting water into steam, or creating steam pressure, but in the case conceived it does not produce this result, but remains as an accumulating steam-creative power, which by a slight change may in a moment exert its whole force, and cause an instantaneous creation of a vast quantity of steam, for the escape of which an ordinary safety-valve is totally inadequate. Mr. Dunn says—"Now, Sir, I believe the temperature getting in advance of the steam pressure indicated is the cause of nearly all every steam boiler explosion." We hear that the pressure-valves and gauges indicated everything as right, and yet, a minute after, the boiler is torn to pieces as if a barrel of gunpowder had been fired inside it, scattering death and destruction around. The engineer in charge has nothing but pressure-valves and gauges to guide him, they do not indicate more than the ordinary working pressure, and he keeps firing on, in total ignorance of the volcano on which he is standing until the catastrophe occurs."

The inference drawn by the writer from these views is that the persons in charge of steam-engines should attend more to the temperature than to the steam pressure, and that a thermometer should be connected with every boiler to indicate the interior temperature. There is much to be said in favour of Mr. Dunn's general doctrine, and the readers of the *Mining Journal* will not now hear it broached for the first time. It is difficult to believe that the mere gradual increase of pressure above the tensile strength of the plates of a boiler could produce the extraordinary results which usually attend these accidents. Take the case of the boiler at Millfields. Mr. Wright was of opinion that all was working up to about 50 lbs. pressure, and that this pressure burst the plate first at a point where it was weak, the rent then extending over some of the strongest and best plates in the boiler. Farther than this, it rose with such immense force that it impaled to every brick, piece of iron, and other material surrounding it, the force almost, or quite, of cannon balls, and itself went an immense height in the air, its weight being all 8 tons. It seems incomprehensible that such effects could be produced except by a sudden accession of pressure, since the safety-valve would afford an outlet for any moderate and gradual increase of steam. It is said that when once the rent in the boiler began it would rapidly extend with less force than was necessary to start it, as a piece of paper or rag, which requires a good deal of strength to commence a tear, is afterwards easily torn across. But in this case the force necessary to rend the first part, torn would also nearly sever the next, so that there would be less force required to finish it. But suppose there were a strong seam in the rag, the tear would stop. In the case of this boiler, plates twice as strong were torn after the first opening was made at the weak point, and it must be remembered that the elastic force of the steam would rapidly diminish as an outlet was made for it, so that a less amount of force must have overcome a greater resistance, according to our view. At any rate, Mr. Dunn's recommendation to use a thermometer in the boiler is a most important one.

The Black Heath Colliery accident, which occurred on the morning of Jan. 18, formed the subject of an enquiry before Mr. C. Hooper, coroner, yesterday. The long time which has elapsed renders a recital of the facts

of this extraordinary accident necessary. The colliery, the property of Mr. W. H. Dawes, is according to all reports admirably equipped, and the works were ventilated in the most efficient manner. The workings in operation at the time of the accident consisted, first, of a seam of thick coal, and secondly, of white ironstone, the latter being considerably below the former, and 300 yards from the surface. Two sets of two shafts; the downcast was used for working the coal, and the upcast, which or slope, connected the two workings. On the Tuesday previous to the accident, the ironstone pit a small pumping-engine was fixed, and on the night of Friday, Feb. 10, the ironstone was being raised by the pump when the pump was not repaired when the accident occurred, consequently the shaft was tampered with, and the working of the coal was suspended until the repairs were effected. 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THE WEST PAR CONSOLS COPPER AND TIN MINING COMPANY.—Notice is hereby given, that a SPECIAL GENERAL MEETING of the shareholders in this company will be HELD at the office, 117, Bishopsgate-street Within, London, on WEDNESDAY, the 21st inst., at Two o'clock precisely, to take into consideration the advisability of abandoning the mine and dissolving the company, or the providing of fresh capital to further prosecute the undertaking.

J. H. MURCHISON, Sec. and Purser.

117, Bishopsgate-street Within, London, May 9, 1862.

THE GREAT BARRIER LAND, HARBOUR, AND MINING COMPANY (LIMITED).—Notice is hereby given, that the FIFTH ORDINARY GENERAL MEETING of shareholders in the above company will be HELD on THURSDAY, the 29th day of May inst., at the offices, 117, Bishopsgate-street, within the City of London, at Twelve o'clock at noon precisely.

May 10, 1862.

By order of the Directors, J. H. MURCHISON, Sec.

THE BEARIZ TIN STREAMING COMPANY (LIMITED).—Notice is hereby given, that the ANNUAL GENERAL MEETING of the shareholders of the Beariz Tin Streaming Company (Limited) will be HELD at the company's offices, No. 17a, Saxe-lane, Bucklersbury, London, on TUESDAY, the 13th day of May inst., at Two o'clock in the afternoon precisely.

By order of the Directors, ALEX. STRACHAN, Sec.

17a, Saxe-lane, Bucklersbury, London, May 1, 1862.

NOUVELLE MONTAGNE COMPANY.—At the last general meeting, held at Engis, on the 23rd of April, it was resolved that the DIVIDEND for the year 1861 should be FIFTY FRANCS PER WHOLE SHARE, payable as follows:—

25 frs. the 1st July next, as first dividend, on presentation of Coupon No. 10, which, marked with a stamp indicating the payment, will be returned to the holders to enable them to receive

25 frs. the 31st December, 1862, as second dividend.

Also, a DIVIDEND of TEN FRANCS PER FIFTHS OF SHARES, payable—5 frs. the 1st of July, 1862, and 5 frs. on the 31st of December, 1862, against the Coupons bearing those dates.

The remaining bonds of the company will be reimbursed from the 1st July next.

The payment of the dividends, also of the bonds drawn, and the coupons of interest, will be made at—

Verviers. At the offices of the company.
London. By Messrs. C. DEVAUX and Co.
Paris. By Mr. ROUGEMONT DE LOWENBERG.
Bruxelles. By Messrs. J. P. MATTHIEU and Fils.
Liege. By Messrs. MAGELTACKER and Fils.

VICTOR SIMON, Le Directeur General de la Societe.

Verviers, le 30 April, 1862.

THE BANTRY BAY SLATE AND SLAB COMPANY (LIMITED).

Capital £15,000, in 20,000 shares of £5 each.

Deposit, £1 on application, and £1 upon allotment. Registered under the Limited Liability Act.

DIRECTORS.

JOSHUA FINNER, Esq., 1, Cecil-street, Strand.

HENRY JORDAN, Esq., 7, Albemarle-street, Piccadilly.

EDWARD FREDERICK LEEKS, Esq., 2, Walbrook, E.C.

Major-General MASON, Brompton.

Hon. FRANCIS HENRY NEEDHAM, 121, Pall-mall.

BANKERS.—Bank of London, Threadneedle-street.

AUDITORS.—To be elected by the shareholders.

SECRETARY.—Mr. NAINBY.

OFFICES, 4, LOTHBURY, LONDON, E.C.

Fall prospectuses, with forms of application for shares, and reports on the quarry, with an estimate of expenditure and income, can be had from the brokers or secretary.

Applications for shares can be sent to the bankers, or, if more convenient, to any of the brokers, or secretary, at the offices, 4, Lothbury, where specimens of slates and slabs can be seen, and all other information obtained.

THE BANTRY BAY SLATE AND SLAB COMPANY (LIMITED).

NOTICE OF ALLOTMENT OF SHARES.—Notice is hereby given, that a large number of applications for shares in this company having been already sent in, the directors will meet to consider them, and MAKE THE NECESSARY ALLOTMENTS on MONDAY, May 12th.

By order, E. NAINBY, Sec.

THE BANTRY BAY SLATE AND SLAB COMPANY (LIMITED).

Notice is hereby given, that ALL APPLICATIONS FOR SHARES in this company must be sent to the bankers, brokers, or secretary, at the company's offices, 4, Lothbury, London, on or before SATURDAY, the 10th May. By order, E. NAINBY, Sec.

THE BOMBAY GAS COMPANY (LIMITED).

(With a promise of exclusive privileges from the Government in Bombay).

Capital, £250,000. First issue, £100,000, in 20,000 shares of £5 each.

10s. per share to be paid to the bankers of the company on application for shares, and 10s. on allotment.

Five per cent. interest will be paid from the date of payment of the several calls until twelve months after the company shall begin to supply gas to the public.

Calls (not exceeding £1 per share) will be made at intervals of not less than three months each. A portion of the shares is reserved for India.

DIRECTORS.

DANIEL THOMAS EVANS, Esq., 5, Elm-court, Temple (Chairman).

CHARLES FREDERICK COLLIER, Esq. (of London by Bombay), Bellair House, Charmouth.

JOHN GILLESPIE, Esq., (Messrs. James Barber and Co., Leadenhall-street).

WARINE B. M. LYSLEY, Esq. (Director of the County and General Gas Company), Queen's-gardens, Hyde-park.

GEORGE PALMER ROBINSON, Esq. (Director of the Chartered Mercantile Bank of India, London, and China), 52, Threadneedle-street.

Major WILLIAM SWAINSON SUART (late Bombay Engineers), Bowls, Chigwell.

HENRY YOUNG, Esq. (late Chief Secretary to Government, Bombay), Palmeira-square, Brighton.

With power to add to their number.

AUDITORS.

Henry M'L. Backler, Esq. (Secretary to the European Gas Company, and Auditor of the Oriental Gas Company).

Richard Desley, Esq. (Auditor to the London Gas Light Company).

ENGINEER.—Thomas Hawksley, Esq., C.E., 20, Great George-street, Westminster.

SECRETARY.—Thomas Hawksley, Esq., 20, Great George-street, Westminster.

BANKERS.—Messrs. Crossley Brothers, Cornhill.

OFFICES.—GRESHAM HOUSE, OLD BROAD STREET, E.C.

In London.—The London Joint Stock Bank.

In Bombay.—The Chartered Merchant Bank of India, London, and China, Bombay, and 52, Threadneedle-street, E.C.

BROKERS.—Messrs. Crossley Brothers, Cornhill.

OFFICES.—GRESHAM HOUSE, OLD BROAD STREET, E.C.

This company is established to light the fort and city of Bombay with gas. Bombay has 400 streets, and a population numbering upwards of 700,000 souls. At once the seat of Government of the Presidency, and the entrepot of the vast and extending commerce of Western and Central India, its limits are continually enlarging, and its population and wealth rapidly increasing. Notwithstanding the urgent need for an economical and brilliant light, the public streets and quays are for the most part unlighted, whilst the fort, the bazaars and shops, the Government offices, the municipal buildings, the gaols, the churches, the barracks and police-stations, railway-stations, and private houses have no other light than is obtainable from oil, the cost of which is much greater than that of gas, and has of late years steadily and largely increased. An urgent and growing necessity, as well as anxiety, therefore exists for the speedy introduction of the European system of lighting cities and towns by means of gas.

The present company having been projected to supply this want, has met with great encouragement from the honourable the Governor and Council of the Presidency, who have testified their desire to see this undertaking speedily carried out by promising a concession of—

1.—The power of supplying Bombay with gas.

2.—An exclusive privilege for the first twenty-one years.

3.—A suitable site for the erection of the necessary works.

The Government has also expressed their "readiness to take from the company the rights required for the Government buildings and premises."

The Honourable the Governor in Council has undertaken "to recommend to the Legislative Council that an enactment be passed for the incorporation of the company" in India, and Her Majesty's Principal Secretary of State for India, by despatch of 31st of August, 1860, to the Governor in Council, Bombay, has expressed his approval by assenting to the grant by the Legislative Council of an Act of Incorporation for the company.

The undertaking will be carried out in sections (commencing with the fort, as required by the Government), when, and as the demand for gas increases.

The directors calculate on supplying gas to the fort of Bombay (containing about 80,000 inhabitants) within twelve months from the commencement of the works, and they propose to employ a large portion of the firstly-raised capital in constructing such of the works as are necessary for lighting this important section of the undertaking.

After duly considering the estimates and calculations made by the company's engineer of the probable cost and returns of the enterprise, the directors entertain the fullest confidence that the undertaking will be more than ordinarily remunerative, and, consequently, that it offers a very desirable field for the investment of both English and native capital. The directors invite attention to the letter of their engineer, Mr. Hawksley, which appears below.

The shares of the Oriental Gas Company, established to light Calcutta, are now quoted in the public share list at a premium of from 35 to 50 per cent., although the company has only recently come into active operation.

Should a sufficient amount of capital not be subscribed to justify the directors in proceeding with the undertaking, the deposits will be repaid without deduction.

The shares will be allotted subject to the provisions of the Articles of Association, which may be inspected at the offices of the company.

The Directors of the Bombay Gas Company (Limited).

GENTLEMEN.—I have very carefully and very minutely enquired into the prospects of this undertaking, and am of opinion that it is capable of yielding a profit of 15 per cent. per annum, of which 10 per cent. may be properly divided amongst the proprietors, and 5 per cent. be appropriated to the reserve and redemption funds usually formed by companies interested in enterprises of a similar character.

I have the honour to be gentlemen,

Your most obedient servant,

30, Great George-street, Westminster, April 17, 1862. T. HAWKSLEY, C.E.

Prospectuses may be obtained at the brokers of the company, Messrs. Crossley Brothers, 30, Cornhill; and at the offices of the company, Gresham House, Old Broad-street, E.C.

Applications for shares should be made in the form annexed to the prospectus.

THE BOMBAY GAS COMPANY (LIMITED).—Notice is hereby given, that the SHARE LIST of this company will be CLOSED at Four P.M. on THURSDAY NEXT, May 15, for London, and for the country on SATURDAY, the 17th Inst.

By order, W. LEA FERRINS, Sec. pro tem.

21, Gresham House, Old Broad-street, London, E.C.

117, Bishopsgate-street Within, London, E.C.

MAY 10, 1862.]

BEDFORD IRONWORKS, TAVISTOCK.
HOLLS, WILLIAMS, AND CO. have generally a GOOD STOCK OF SECOND-HAND MINING MATERIALS FOR SALE. They also MANUFACTURE STEAM ENGINES of every description on the newest principle, and wrought-iron work made at the shortest notice. Machinery sent to all parts of the world. Steam boilers and chains warranted of the best description.

SALE, a 100 in. cylinder ENGINE, in fine order, good as new. Cheap.—Apply at No. 184, Gresham House, Old Broad-street.

SALE, a splendid 24 in. cylinder ROTARY ENGINE, with all parts, fittings, bolts, &c., complete, equal to new, having been but recently sold to Mr. EVANS, 1, Bunkhill-row, London.

SALE, ONE PAIR of second-hand HIGH PRESSURE HORIZONTAL ENGINES, diameter of cylinders 15 in., and 20 in. stroke, rectangular, strong wrought-iron shaft, adapted for pumping and winding. ONE HIGH PRESSURE HORIZONTAL ENGINE, diameter of cylinder 17½ in., and 24 in. stroke, rectangular, strong wrought-iron shaft, and highly finished gearing. ONE new VERTICAL ENGINE, diameter, 12 in. stroke, all bright work. ONE 2 horse power model BEAM ENGINE, well finished. NINE COLLIERIES TRAMS, capable of holding 2 tons of coal. COLLIERIES TRAMS, capable of holding 1 ton of coal. ONE 2 ft. 6 in. FAN, small fan, for collieries. SEVERAL useful SCREW JACKS, capable to lift 1000 lbs. for particulars and prices, apply to GEORGE YOUNG, Briton Ferry Foundry, Chester.

LEVER, WEST GORTON WORKS, MANCHESTER, INVESTOR AND SOLE MANUFACTURER OF the INSTRUMENTS, for VENTILATING SHAFTS AND EXPLORING DRIFTS, IMPROVED BRATTICE AND DOOR-CLOTH IN ANY WIDTH, for AIR COURSES IN MINES.

by the Governments of Great Britain, Spain, Denmark, Russia, Brazil, East and West Indies.

STON'S PATENT BOILER FLUID, FOR REMOVING AND PREVENTING CRUSTATION IN STEAM BOILERS, LAND AND MARINE.

P. S. EASTON AND G. SPRINGFIELD, Patentees and Sole Manufacturers,

57, 58, and 59, WAPPING WALL, LONDON, E.

Agents in the principal towns of Great Britain and the Colonies.

TO COAL OWNERS AND COKE BURNERS.

CKWORTH'S PATENT COAL WASHER, PURIFIER.—This MACHINE will EXTRACT THE SHALE AND ALL IMPURITIES FROM SMALL COAL AT A COST OF TWOPENCE PER TON.

For particulars, apply to the makers, A. and T. FAY, Temple-gate Works,

to Mr. J. RIDER, Basinghall-street, Leeds.

EDWARD'S PATENT MINERAL ORE AND COAL WASHING MACHINE.—This is by far the MOST ECONOMICAL, both in working, as well as the MOST DURABLE and EFFICIENT MACHINE complete machine, capable of washing from 25 to 50 tons per diem (according to size).—Full particulars, testimonials, &c., may be obtained from E. EDWARDS, Beaumont-buildings, Strand, London.

A Model may be seen at Mr. EDWARDS's office, Beaumont-buildings.

BROTHERS beg to intimate that, having become SOLE PROPRIETORS in the United Kingdom of PROV. DEVILLE'S METHOD OF PURIFYING ALUMINIUM, they are now in a POSITION TO SUPPLY, from their works, this metal and its compound with copper, known under the name of ALUMINIUM.—Newcastle-on-Tyne, September, 1860.

ISH BORER STEEL.—Upwards of ONE HUNDRED AND SIXTY MINES are SUPPLIED WITH this STEEL, and the DEMAND RAPIDLY INCREASING.—For terms, apply to R. MUSHET and Co., Forest of Coleford, Gloucestershire.

OGEN STEEL, CAST STEEL, SHEAR STEEL, and ROVED FOREST L. BLISTER STEEL supplied to order by ROBERT and Co., Forest Steel Works, near Coleford, Gloucestershire. Address to the Works, Coleford.

AYS OF ORES AND METALS Conducted by Messrs. GRIFFITH AND BARTON, Assayers to the Bank of England and Anglo-Mexican Mints, 74, COLEMAN STREET, LONDON.

AYS AND ANALYSES OF EVERY DESCRIPTION Conducted by JOHN MITCHELL, F.C.S., M.G.A. (late Mitchell and Richard), of "Manual of Practical Assaying," "Metallurgical Papers," &c. Communications and samples to be addressed (free) to Mr. MITCHELL, care of Mr. B. Moore, Moorgate-street, London, E.C.

ASE'S PATENT EXCAVATING MACHINERY, SUPERSEDES THE SLOW AND EXPENSIVE USE OF MANUAL LABOUR IN SINKING SHAFTS, DRIVING LEVELS, TUNNELLING, &c., is guaranteed to sink any rock of average hardness at a minimum rate of 1 fm. per diem, and at the rate of 2 fms. in three days.

Prices and full particulars may be obtained on application, and contracts undertaken by the above for the erection and completion of those engines in any part of the kingdom, guaranteeing the same for any reasonable period.

TEST OF WIRE-ROPE AT LIVERPOOL.—

The value of Messrs. Hutchings's statement, relative to a test of their manufacture, will be properly estimated when it is known that the ropes were brought down from London specially prepared for the purpose, and not taken promiscuously from their stock, as the samples tested in October were.

The following, extracted from the Mining Journal of November 10, 1860, shows the relative strength of the different makers' ropes on that occasion. The samples tested were privately purchased some time previously, and spliced for testing by Newall and Co.'s workmen. The test took place in the presence of representatives from the manufacturers, reporters for the press, and a large number of gentlemen connected with mining and shipping in Liverpool:—

SIZE OF ROPE TESTED.
3½ inch. 3½ inch.
Garnock, Bibby, and Co.'s broke at 18 tons 5 cwt. 8 tons 15 cwt.
R. S. Newall and Co.'s 16 " 10 " 7 " 15 "
A. J. Hutchings and Co.'s 11 " 10 " 5 " 0 "

* Messrs. Hutchings's samples were from 1-16 to 3-16 over size.

From this it will be seen that the breaking point of Garnock, Bibby, and Co.'s rope was on the average 13 per cent. over the guaranteed strain, while those of Hutchings and Co. were 30 per cent. below it.

GARNOCK, BIBBY, AND CO., SWAN HEMP AND WIRE-ROPE WORKS, CHAPEL STREET, LIVERPOOL.

Flat and round wire-ropes of steel and charcoal iron for mines, inclines, &c., of first quality wire, and highest standard of strength.

PATENT SAFETY FUSE.—The GREAT EXHIBITION PRIZE MEDAL was AWARDED to the MANUFACTURERS of the ORIGINAL SAFETY FUSE, BICKFORD, SMITH, DAVEY, and PRYOR, who beg to inform Merchants, Mine Agents, Railway Contractors, and all persons engaged in Blasting Operations, that, for the purpose of protecting the public in the use of a genuine article, the PATENT SAFETY FUSE has now a thread wrought into its centre, which, being patent right, is fallibly distinguished from all imitations, and ensures the continuity of the gunpowder.

This Fuse is protected by a Second Patent, is manufactured by greatly improved machinery, and may be had of any length and size, and adapted to every climate.

Address.—BICKFORD, SMITH, DAVEY, and PRYOR, Tuckington, Cornwall, E.C.

DAVEY'S PATENT BLASTING POWDER, MANUFACTURED BY DAVEY BROTHERS AND CO., NANCEKUKE POWDER WORKS, TUCKINGMILL, CORNWALL.

This blasting powder possesses the following advantages over every other in use:—IT COMBUSTION IS SLOWER AND MORE PERFECT when confined in the hole, IT IS MORE IMPERVIOUS TO MOISTURE, PRODUCES LESS SMOKE, is LESS DANGEROUS, IT BURSTS AT MUCH ROCK with a CHARGE OCCUPYING THE SAME OR EVEN LESS SPACE, and its WEIGHT being TWENTY TO TWENTY-FIVE PER CENT. LESS than ordinary gunpowder, a SAVING OF ONE-FOURTH THE COST is EFFECTED.

DAVEY BROTHERS and Co. beg to state that this powder is specially made for blasting, and from its slow combustion is not adapted for projectiles. They would, therefore, caution consumers not to be induced by interested parties to put it to a fallacious trial, by firing a ball from a mortar, which is no test of its explosive force when confined.

AYTOON'S PATENT SAFETY CAGE AND HOIST. CHANGE OF LICENSE FEE WILL SHORTLY TAKE PLACE, from £1 to £6 and upwards.

[See Mining Journal of May 3.]

Apply to the patentee, ROBERT AYTOON, 3, Fetter-row, Edinburgh.

BASTIER'S PATENT CHAIN PUMP, APPARATUS FOR RAISING WATER ECONOMICALLY, ESPECIALLY APPLICABLE TO ALL KINDS OF MINES, DRAINAGE, WELLS, MARINE, FIRE, &c.

J. U. BASTIER begs to call the attention of proprietors of mines, engineers, architects, and the public in general, to his new pump, the cheapest and most effective ever introduced to public notice. The principle of this new pump is simple and effective, and its action is so arranged that accidental breakage is impossible. It occupies less space than any other kind of pump in use, does not interfere with the working of the shafts, and unites lightness with a degree of durability almost imperishable. By means of this hydraulic machine water can be raised economically from wells of any depth; it can be worked either by steam-engine, or any other motive power, by quick or slow motion. The following statement presents some of the results obtained by this hydraulic machine, as daily demonstrated by use:—

1.—It utilises from 90 to 92 per cent. of the motive power.

2.—Its price and expense of installation is 75 per cent. less than the usual pumps employed for mining purposes.

3.—It occupies a very small space.

4.—It raises water from any depth with the same facility and economy.

5.—It raises with the water, and without the slightest injury to the apparatus sand mud, stone, and every object of a smaller diameter than its tube.

6.—It is easily removed, and requires no cleaning or attention.

A mining pump can be seen daily at work, at Wheal Concord Mine, South Sydenham, Devon, near Tavistock; and a shipping pump at Woodside Graving Dock Company (Limited), Birkenhead, near Liverpool.

J. U. BASTIER, sole manufacturer, will CONTRACT TO ERECT his PATENT PUMP AT HIS OWN EXPENSE, and will GUARANTEE IT FOR ONE YEAR, or will GRANT LICENSES to manufacturers, mining proprietors, and others, for the USE of his INVENTION.

OFFICES, 47, WARREN STREET, FITZROY SQUARE.

London, March 21, 1860. Hours from Ten till Four. J. U. BASTIER, C.E.

BY HER MAJESTY'S ROYAL LETTERS PATENT



MESSRS. ALLCHIN AND SON, PATENTEES and MANUFACTURERS of an IMPROVED STEAM SUPERHEATING APPARATUS, SUITABLE for PORTABLE, LOCOMOTIVE, STATIONARY, and MARINE BOILERS. Can be applied to old as well as new, EFFECTING a SAVING in FUEL of THIRTY-FIVE to FORTY PER CENT., and a surprising INCREASE in the POWER of the ENGINE, likewise a REDUCTION of TWENTY-FIVE to THIRTY PER CENT. in FEED WATER.

TO BE SOLD, a bargain, a 10 horse BEAM CONDENSING ENGINE and BOILER, in good working condition. Price, £50. The room is required, as a larger engine has been supplied.—For particulars, apply to ALLCHIN and Son, Globe Engine Works, Northampton.

RAILWAY WAGONS.—WILLIAM A. ADAMS AND CO., MIDLAND WORKS, BIRMINGHAM. BROAD AND NARROW GAUGE COAL AND IRONSTONE WAGONS. IN STOCK—FOR SALE OR HIRE.

RAILWAY WAGONS.—WILLIAM HARRISON AND CAMM HAVE ON HAND RAILWAY, COAL, COKE, AND MINERAL WAGONS, ON SALE OR HIRE, AT THE ROTHERHAM WAGON WORKS, MASBRO'.

THE BIRMINGHAM WAGON COMPANY (LIMITED) HAS RAILWAY WAGONS FOR HIRE. Apply to the SECRETARY, 3, Newhall-street, Birmingham.

TO RAILWAY COMPANIES, CONTRACTORS, COAL AND IRONMASTERS, WAGON BUILDERS, &c.—THE BEST and CHEAPEST LOCOMOTIVE GREASE is MANUFACTURED by BUCKNELL, CHESTERFIELD. Only one quality made. A trial is solicited. References given to some of the principal coal owners in the district. Sample casks from 2 cwt. upwards. Chesterfield, February 6, 1862.

NOTICE TO RAILWAY COMPANIES.—A RAILWAY SIGNAL of a NOVEL DESCRIPTION (patented) is NOW IN OPERATION on the MANCHESTER AND ALTRINCHAM RAILWAY, which GIVES NOTICE of the APPROACH of a TRAIN HALF A MILE OFF, and, if required, can announce it at any other given distance. It is novel and simple in its construction, not a single complicated movement in it, and when laid down will not require repairs for years. A model may be seen at the Mining Journal office, 26, Fleet-street, London, in the course of a week, and a gentelman will shortly call on the different railway companies centering in the metropolis to give any required explanations.

JOB TAYLOR AND CO., SWAN FOUNDRY, OLBURY, NEAR BIRMINGHAM, SOLE PROPRIETORS of HINTON'S PATENT CUPOLA, which CONSUMES FIFTY PER CENT. LESS COKE than any cupola yet invented. MAKERS of ALL KINDS of MACHINERY connected with the GRINDING and TEMPERING of EVERY SORT of CLAY or MARL, and for the MANUFACTURE of BRICKS, TILES, DRAIN PIPES, &c. Also, of HIGH and LOW PRESSURE STEAM ENGINES of any dimensions, and of GENERAL MACHINERY.

SHORTRIDGE, HOWELL, AND CO., HARTFORD STEEL WORKS, SHEFFIELD, SOLE MANUFACTURERS of HOWELL'S PATENT HOMOGENEOUS METAL PLATES for BOILERS, LOCOMOTIVE FIRE BOXES, and TUBES, COMBINING THE STRENGTH of STEEL with the MALLEABILITY of COPPER. RUSSELL AND HOWELL'S PATENT CAST STEEL TUBES. McCONNELL'S PATENT HOLLOW RAILWAY AXLES.—For prices and terms, apply to SHORTRIDGE, HOWELL, and CO., Hartford Steel Works, Sheffield; or Messrs. HARVEY and CO., 12, Haymarket, London.

GEORGE WHITEHOUSE (late James Colley and Sons), MANUFACTURERS of BOLSTER PINS and BOXES, BOLTS and NUTS, WOOD SCREWS, LIFTING JACKS, RAILWAY SPIKES, RIVETS, and EVERY DESCRIPTION of RAILWAY FASTENINGS. HOPE WORKS, WEST BROMWICH. (ESTABLISHED 1815.) LONDON AGENTS.—MESSRS. R. AND W. PULLING, 10, NEW BROAD STREET MEWS, E.C.

WATER PRESSURE ENGINES. WILLIAM J. SMITH, ENGINEER, BELMONT, NEAR DURHAM.

Begs most respectfully to CALL the ATTENTION of LEAD MINE PROPRIETORS and OTHERS to his IMPROVED WATER PRESSURE (HYDRAULIC) ENGINES, which are ADAPTED for both SURFACE and UNDERGROUND OPERATIONS. The cylinder is placed horizontal, which, with winding drum and pumping apparatus, are fitted on strong cast-iron bed plates, bolted on Menai timber foundation frame. They are made from the very best material, and extra strong in all their parts, fitted with improved slide pistons, slot link motion for reversing, and can be managed by any ordinary workman.

The above engines have been at work pumping and winding in several of the lead mines of Aiston Moor, Cumberland, during the last twelve years, and are giving the utmost satisfaction.

Prices and full particulars may be obtained on application, and contracts undertaken by the above for the erection and completion of those engines in any part of the kingdom, guaranteeing the same for any reasonable period.

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[See Mining Journal of May 3.]

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THE MINING SHARE LIST.

DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Dividends Per Share.	Last Paid.
1000 Alderley Edge (Cheshire) [L.]	10 0 0 ..	60 ..	7 8 12 0 ..	0 15 0 ..	Mar. 1862
4000 Bedford United (copper), Tavistock	2 6 8 ..	5 ..	12 13 0 ..	0 1 6 ..	Mar. 1862	
240 Boscan (tin), St. Just	20 10 0 ..	60 ..	38 10 0 ..	0 1 0 ..	Mar. 1862	
200 Botallack (tin, copper), St. Just	91 5 0 ..	250 ..	445 15 0 ..	3 10 0 ..	Feb. 1862	
200 Carr Brea (copper, tin), Illogan	15 0 0 ..	72 ..	271 10 0 ..	2 0 0 ..	Jan. 1862	
200 Cefn Cwm Brwyno (lead), Cardigan	33 0 0 ..	33 ..	9 0 0 ..	4 0 0 ..	April. 1861	
2450 Cook's Kitchen (copper), Illogan	17 0 9 ..	34 ..	32 34 ..	1 0 0 ..	7 0 0 ..	Jan. 1862
256 Copper Hill (copper) Redruth	48 0 0 ..	100 ..	4 10 0 ..	2 0 0 ..	Jan. 1862	
12000 Copper Miners of England	72 0 0 ..	25 ..	7 16 ..	Half-yrly.		
25000 Ditto ditto (stock)	100 0 0 ..	24 ..	1 ..	per cent.	Half-yrly.	
1665 Craddock Moor (copper), St. Cleer	8 0 0 ..	31 ..	7 4 0 ..	0 5 0 ..	Mar. 1862	
512 Creesgnowe and Penkivel, St. Columb	5 ..	5 ..	0 10 0 ..	0 10 0 ..	Jan. 1862	
87 Cwm Elin (lead) Cardiganshire	7 10 0 ..	21 ..	7 8 0 ..	0 10 0 ..	April. 1862	
128 Cwmystwyth (lead), Cardiganshire	60 0 0 ..	200 ..	239 10 0 ..	4 0 0 ..	Mar. 1862	
280 Derwarrin (mines, sil.-lead), Durham	300 0 0 ..	180 ..	142 0 0 ..	5 0 0 ..	June. 1861	
1024 Devon Gt. Con. (cop.), Tavistock [S.E.]	1 0 0 ..	440 ..	428 445 ..	790 0 0 ..	8 0 0 ..	Mar. 1862
358 Doicote (copper, tin), Camborne	128 17 6 ..	600 ..	665 10 0 ..	8 0 0 ..	April. 1862	
3000 Dwyngwyn (lead), Wales	12 6 6 ..	10 ..	0 16 0 ..	0 2 0 ..	Mar. 1862	
512 East Bassett (cop.), Redruth [S.E.]	20 10 0 ..	44 ..	45 46 ..	98 0 0 ..	2 0 0 ..	Mar. 1862
6144 East Cardon (copper), St. Cleer [S.E.]	3 14 6 ..	41 ..	41 42 43 44 ..	3 0 0 ..	0 15 0 ..	April. 1862
300 East Darren (lead), Cardiganshire	83 0 0 ..	45 ..	81 10 0 ..	1 0 0 ..	Mar. 1862	
128 East Pool (tin, copper), Pool, Illogan	24 8 0 ..	300 ..	307 10 0 ..	2 10 0 ..	April. 1862	
2048 East Pool (tin, copper), Germany	0 10 0 ..	5 ..	4 15 5 ..	0 4 0 ..	—	
2800 Foxdale (id.), [L.] (2560 235 pd.)	246 230 pd.	19 ..	35 ..	—	—	Dec. 1861
5000 Frank Mills (lead), Devon	3 18 6 ..	44 ..	0 16 0 ..	0 2 0 ..	Mar. 1862	
6000 Great South Toliog [S.E.], Redruth	0 14 6 ..	41 ..	5 54 ..	7 18 6 ..	0 0 0 ..	Dec. 1861
1798 Great Wheal Fortune (tin), Bream	18 6 0 ..	26 ..	26 27 ..	2 0 0 ..	0 10 0 ..	April. 1862
5908 Great Wh. Vor (tin, cp.), Hisston [S.E.]	40 0 0 ..	64 ..	64 64 ..	1 17 6 ..	0 5 0 ..	Mar. 1862
10240 Gunnis Hall (Clitters' Adit)	0 3 0 ..	56 ..	0 3 0 ..	0 1 0 ..	Mar. 1862	
1024 Herodshot (id.), near Liskeard [S.E.]	8 10 0 ..	38 ..	18 0 0 ..	1 15 0 ..	Feb. 1861	
1000 Hibernian Mine Company	92 6 2 ..	27 4 ..	7 10 0 ..	1 0 0 ..	Sept. 1861	
4000 Liburn (lead), Cardiganshire, Wales	18 18 0 ..	110 ..	283 10 0 ..	2 0 0 ..	Mar. 1862	
6000 Marke Valley (copper), Cardigan	4 10 0 ..	10 1/2 ..	1 17 0 ..	0 0 0 ..	April. 1861	
1800 Miners Mining Co. [L.], (id.), Wrexham	50 0 0 ..	170 ..	81 19 0 ..	3 10 0 ..	Jan. 1862	
30000 Mining Co. of Ireland (lead, coal)	8 0 0 ..	17 4 ..	17 4 ..	14 7 11 0 ..	0 7 0 ..	Dec. 1861
640 Mount Pleasant (lead), Mold	4 0 0 ..	32 ..	0 3 0 ..	0 1 0 ..	Mar. 1862	
6000 New Birch Tow and Titter Con. (tin)	1 8 6 ..	24 ..	0 3 0 ..	0 1 0 ..	Mar. 1862	
1266 North Grambler (copper), Redruth	2 3 4 ..	44 ..	4 4 4 ..	0 7 6 ..	0 5 0 ..	Dec. 1861
5000 Orsedd (lead), Flintshire	0 0 8 ..	14 ..	36 12 0 ..	0 3 0 ..	Mar. 1862	
6400 Par Consols (cop.), St. Blazey [S.E.]	1 2 6 ..	5 ..	37 10 0 ..	0 5 0 ..	Dec. 1861	
1772 Polbero (tin), St. Agnes	50 0 0 ..	—	5 ..	6 19 6 ..	0 10 0 ..	Dec. 1861
1120 Providence (tin), Uly Lelant [S.E.]	10 6 7 ..	42 ..	40 42 ..	63 0 0 ..	1 5 0 ..	Feb. 1862
6000 Rosewall Hill and Ransom United	2 16 0 ..	35 ..	35 35 ..	0 8 0 ..	0 3 0 ..	Mar. 1862
16 Rhosneigr (lead)	50 0 0 ..	—	1250 0 0 0 ..	0 0 0 ..	0 Quarterly.	
512 South Cardon (cop.), St. Cleer [S.E.]	1 5 0 ..	840 ..	325 345 ..	871 0 0 ..	5 0 0 ..	Mar. 1862
513 South Toliog (cop.), Illogan [S.E.]	8 0 0 ..	52 ..	49 51 ..	106 0 0 ..	1 10 0 ..	Mar. 1862
498 S. Wh. Francis (cop.), Illogan [S.E.]	18 19 0 ..	105 ..	100 102 1/2 ..	359 8 0 ..	0 1 0 ..	May. 1861
280 Spearne Moor (tin, copper), St. Just	31 17 9 ..	50 2 ..	9 15 0 ..	0 1 0 ..	June. 1861	
840 St. Ives Consols (tin), St. Ives	8 0 0 ..	26 ..	484 10 0 ..	0 0 0 ..	Nov. 1861	
6000 Tamar Con. (sil.-id.), Balastron [S.E.]	4 10 0 ..	28 ..	5 6 0 ..	2 8 0 ..	Jan. 1861	
6000 West Fowey Consols (tin and copper)	7 10 0 ..	4 ..	0 17 0 ..	0 3 0 ..	Jan. 1862	
2000 Trelowarri Consols (tin, neath, Helston)	10 0 0 ..	100 ..	55 0 0 ..	0 2 0 ..	Mar. 1862	
4200 Vigras and Clogau (cop.) [L.]	2 15 0 ..	42 4 ..	2 12 6 ..	1 0 0 ..	April. 1862	
1024 Wendron Consols (tin), Wendron	11 15 10 ..	12 ..	8 15 0 ..	1 0 0 ..	Jan. 1861	
6000 West Bassett (copper), Illogan [S.E.]	5 0 0 ..	13 ..	22 5 0 ..	5 0 0 ..	Mar. 1862	
60 West Burhill Gill (lead), Yorkshire	50 0 0 ..	—	14 10 0 ..	3 0 0 ..	June. 1861	
1022 West Cardon (cop.), Liskeard [S.E.]	5 0 0 ..	34 ..	35 37 1/2 ..	100 11 3 ..	1 0 0 ..	Feb. 1862
6400 West Fowey Consols (tin and copper)	7 10 0 ..	4 ..	0 17 0 ..	0 3 0 ..	Jan. 1862	
1024 West Penstruthl	4 0 0 ..	—	7 ..	2 19 6 ..	2 19 6 ..	May. 1862
512 West Bassett (copper), Illogan [S.E.]	5 2 6 ..	100 ..	98 97 1/2 ..	582 10 0 ..	0 3 0 ..	April. 1862
254 West Fowey Consols (cop.), Illogan [S.E.]	5 0 0 ..	65 ..	929 0 0 ..	0 2 0 ..	Mar. 1861	
2900 Wh. Clifford Amalgamated (cop.), Gwen. 30	0 0 0 ..	32 ..	30 32 1/2 ..	27 2 8 ..	0 10 0 ..	April. 1862
128 Wh. Friendship (copper), Devon	50 0 0 ..	90 ..	3400 10 0 ..	5 0 0 ..	Feb. 1861	
5000 Wh. Francis (cop.), Illogan [S.E.]	18 19 0 ..	105 ..	100 102 1/2 ..	359 8 0 ..	0 1 0 ..	May. 1861
280 Spearne Moor (tin, copper), St. Just	31 17 9 ..	50 2 ..	9 15 0 ..	0 1 0 ..	June. 1861	
840 St. Ives Consols (tin), St. Ives	8 0 0 ..	26 ..	484 10 0 ..	0 0 0 ..	Nov. 1861	
6000 Tamar Con. (sil.-id.), Balastron [S.E.]	4 10 0 ..	28 ..	5 6 0 ..	2 8 0 ..	April. 1862	
6000 West Fowey Consols (tin and copper)	7 10 0 ..	4 ..	0 17 0 ..	0 3 0 ..	Jan. 1862	
1024 West Penstruthl	4 0 0 ..	—	7 ..	2 19 6 ..	2 19 6 ..	May. 1862
512 West Bassett (copper), Illogan [S.E.]	5 2 6 ..	100 ..	98 97 1/2 ..	582 10 0 ..	0 3 0 ..	April. 1862
254 West Fowey Consols (tin and copper)	5 0 0 ..	65 ..	929 0 0 ..	0 2 0 ..	Mar. 1861	
2900 Wh. Clifford Amalgamated (cop.), Gwen. 30	0 0 0 ..	32 ..	30 32 1/2 ..	27 2 8 ..	0 10 0 ..	April. 1862
128 Wh. Friendship (copper), Devon	50 0 0 ..	90 ..	3400 10 0 ..	5 0 0 ..	Feb. 1861	
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280 Spearne Moor (tin, copper), St. Just	31 17 9 ..	50 2 ..	9 15 0 ..	0 1 0 ..	June. 1861	
840 St. Ives Consols (tin), St. Ives	8 0 0 ..	26 ..	484 10 0 ..	0 0 0 ..	Nov. 1861	
6000 Tamar Con. (sil.-id.), Balastron [S.E.]	4 10 0 ..	28 ..	5 6 0 ..	2 8 0 ..	April. 1862	
6000 West Fowey Consols (tin and copper)	7 10 0 ..	4 ..	0 17 0 ..	0 3 0 ..	Jan. 1862	
1024 West Penstruthl	4 0 0 ..	—	7 ..	2 19 6 ..	2 19 6 ..	May. 1862
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840 St. Ives Consols (tin), St. Ives	8 0 0 ..	26 ..	484 10 0 ..	0 0 0 ..	Nov. 1861	
6000 Tamar Con. (sil.-id.), Balastron [S.E.]	4 10 0 ..	28 ..	5 6 0 ..	2 8 0 ..	April.	